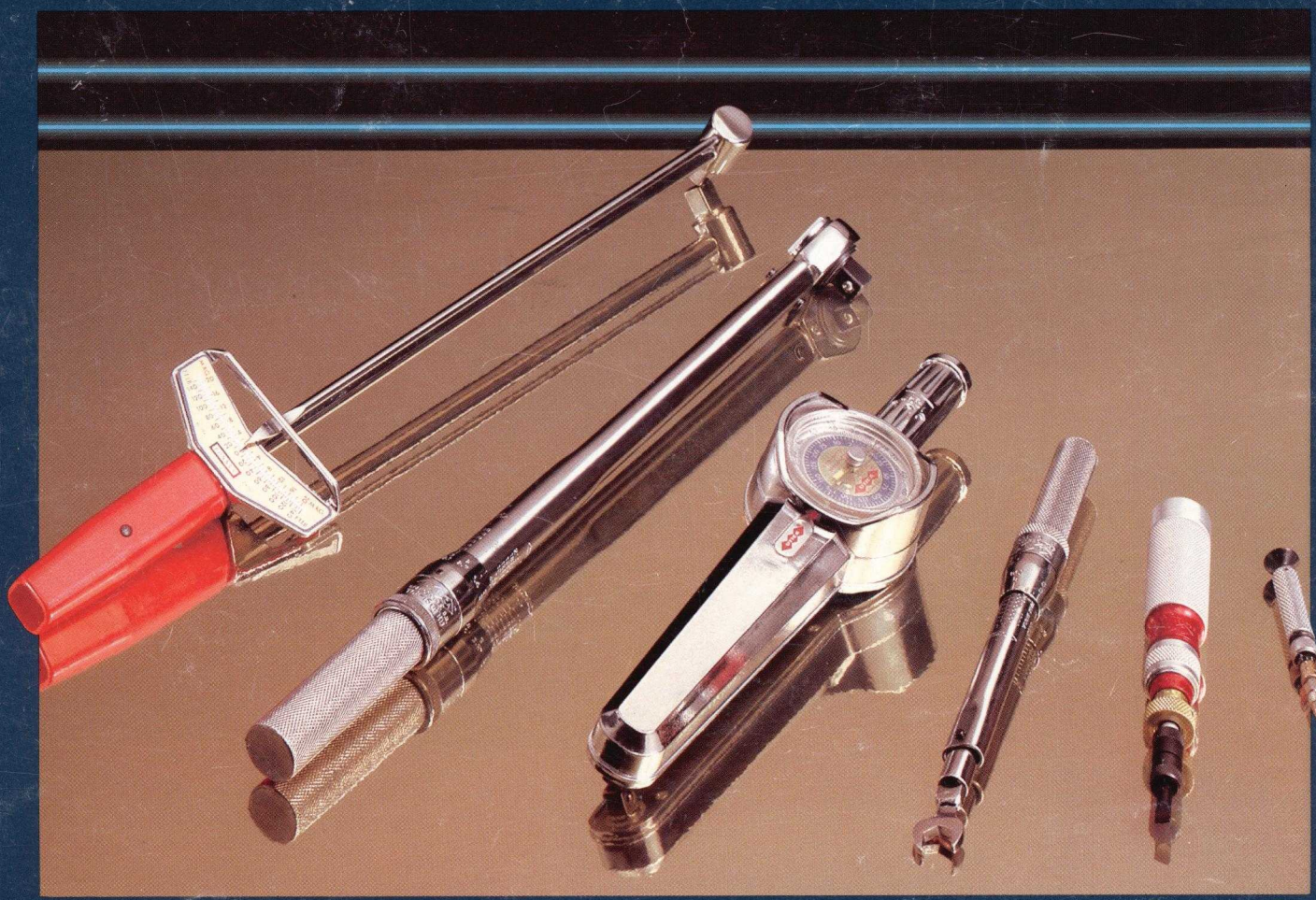
UTICA®

Torque Products



Catalog No. 860-3

THE TRIANGLE TOOL GROUP, INC.®
Subsidiary of The Triangle Corporation

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NIDA-SIDA Manufacturers Code No. 782238

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The Triangle Tool Group, Inc., subsidiary of The Triangle Corporation, is a leading designer and manufacturer of standard and specialized pliers, wrenches, sockets, torque products, aerosol chemicals and adhesives.

With advanced engineering and manufacturing techniques, The Triangle Tool Group produces over 3,000 different types of professional quality hand tools.

Marketed under the Bonney,® Utica,® Diamond,® Utica-Swiss® and Erem® brand names, these market-matched products meet a wide range of automotive, commercial, farm, consumer, industrial, electronics, and telecommunication needs. Each tool is carefully designed and crafted to meet demanding professional standards and to provide years of reliable service.

Produced with dedicated craftsmanship, recognized worldwide for outstanding quality, and fully warranted for normal life and use, The Triangle Tool Group hand tool and chemical brands offer outstanding value to our distributors, wholesalers, retailers, and their customers.

Sales and Distribution

The Triangle Tool Group, Inc. adheres to a strict policy of selective distribution in marketing its Bonney,® Utica,® Diamond,® Utica-Swiss,® and Erem® branded products through a worldwide distributor network.

Conveniently located in all major trading areas, our authorized distributors maintain inventories to support their market and specific customer needs.

In addition, qualified sales representatives are available to assist distributors and their customers in meeting standard or special tool requirements. They facilitate communication between distributors and our Marketing and Sales Departments in Orangeburg, South Carolina.

The Triangle Tool Group, its distributors and sales representatives are a dedicated team. All work together to provide our customers with the industry's most prompt and exemplary service.

Federal Specifications

Federal specifications are displayed in this catalog only as a classification guide for tool types. Use of this classification system does not necessarily indicate full compliance of a specific tool to federal specifications.

For detailed information, contact:
The Triangle Tool Group, Inc., Cameron Road, Orangeburg, South Carolina 29115,
Attention: Sales Department.

Special Application Tools

With a recognized capability in the design and manufacture of special purpose hand tools, The Triangle Tool Group can assist you in developing products required to meet unusual application needs.

However, it will always be more cost-efficient for you to utilize our standard hand tool products.

For those applications in which a specialized tool is required, send specific details to The Triangle Tool Group, Inc., Cameron Road, Orangeburg, South Carolina 29115, Attention: Sales Department.

Full Lifetime Warranty

Each product carrying the trademark Utica®/Bonney®, except torque products, is warranted by The Triangle Tool Group, Inc., for the normal life of the product to be free from any defect in material or workmanship.

Any product failing to conform with this warranty should be sent to The Triangle Tool Group, Inc., Cameron Road, Orangeburg, South Carolina 29115, Attention: Manager of Customer Service (or to the distributor of Utica®/Bonney® tools nearest you).

If inspection reveals that the product does not conform with this warranty, the product will be repaired or replaced, at the option of The Triangle Tool Group, Inc., without charge within 10 days of receipt of the product by The Triangle Group, Inc.

This warranty does not extend to torque products, or to any product which has been altered or abused.

Torque Products Limited Warranty

Each torque product carrying the trademark Utica®/Bonney® is warranted, except as to calibration, by The Triangle Tool Group, Inc., for one year from the date of purchase to be free from any defect in material or workmanship.

Any product failing to conform with this warranty should be sent to The Triangle Tool Group, Inc., Cameron Road, Orangeburg, South Carolina 29115, Attention: Manager of Customer Service (or to the distributor of Utica®/Bonney® tools nearest you). If inspection reveals that the product does not conform with this warranty, the product will be repaired or replaced, at the option of The Triangle Tool Group, Inc., without charge within 10 days of receipt of the product by The Triangle Tool Group, Inc.

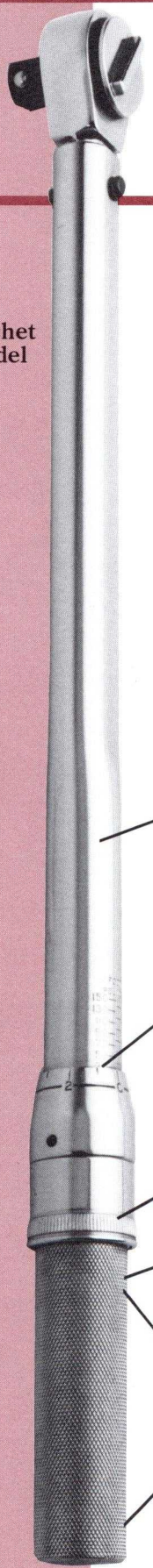
Torque Wrench Cautions

1. Do not use a torque wrench to loosen tightened fasteners beyond maximum tool capacities.
2. Never use an extension unless authorized by the manufacturer.
3. Torque wrenches are precision instruments – provide adequate storage to protect from damage. RETURN MICROMETER WRENCHES TO LOWEST SETTING AFTER EACH USE.
4. ALWAYS WEAR APPROVED EYE PROTECTION.

"Click" Type MICROMETER ADJUSTABLE Torque Sensing Wrenches

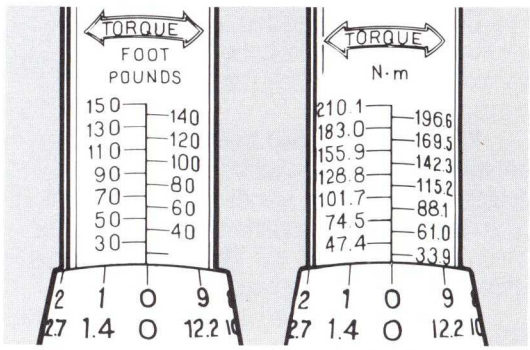
- ***Plain, Ratchet and Flex Head Models***
- ***Drive Sizes: 1/4" through 3/4"***
- ***Audible "click" and/or a few degrees of travel indicate application of desired torque***

Ratchet Model



Exclusive Utica® Features

- Audible "click" and/or a few degrees of travel provide simple, fast indication of micrometer – accurate torque settings.
- Patented, low friction torque control mechanism produces accurate readings in either direction.
- Accuracy is ± 4% right hand (clockwise) and ± 6% left hand (counterclockwise) within upper 80% of scale.
- Two calibration adjustments (major and fine) permit easy and precise torque settings. Most conventional torque wrenches have only one adjustment.
- Dual scale models give readings in in.-lbs./Newton Metre or ft.-lbs./Newton Metre.
- Patented spring-loaded locking collar locks scale on desired reading and remains in locked position. Wrench cannot be left inadvertently unlocked.
- Heavy-duty, reversible ratchet models have quick-shift lever to allow easy single-hand shifting.
- Slim, lightweight design reduces fatigue and facilitates use in confined work areas.



FRONT ft.-lbs. **BACK Newton Metre**

Dual Scale Illustration

ANSI and Federal Specifications, to which many Utica®/Bonney® brand products conform, are listed on Page 21.

Ratchet Head Models

Ratchet Head

in.-lb. Graduations

Drive Size (in.)	Catalog No.	EDP No.	Range in.-lb.	Range Nm	Graduations in.-lb.	Graduations Nm	Length (in.)	Weight (lb.)
1/4	TCI-150RA*	28414-00	30-150	2.82-17.51	1	.12	9 1/2	.88
3/8	TCI-150RA-3/8*	28405-00	30-150	2.82-17.51	1	.12	9 1/2	.88
3/8	TCI-750R	28417-00	150-750	—	5	—	14 1/4	3.38
3/8	TCI-250R*	28435-00	50-250	5.08-28.81	1	.12	12 1/2	3.00
1/2	TCI-750R-1/2	28419-00	150-750	—	5	—	14 1/2	2.50
1/2	TCI-1600R	28421-00	700-1600	—	10	—	18 1/2	2.50
3/4	TCI-7250R*	28437-00	1450-7250	155.4-805.1	25	2.8	44	13.47

*Dual Scale Model: in.-lb. and Nm graduations.

ft.-lb. Graduations

Drive Size (in.)	Catalog No.	EDP No.	Range ft.-lb.	Range Nm	Graduations ft.-lb.	Graduations Nm	Length (in.)	Weight (lb.)
3/8	TCI-75FRN*	28429-00	15-75	17.0-105.1	5	1.4	14 1/4	2.06
1/2	TCI-150FRN*△	28433-00	30-150	33.9-210.1	1	1.4	18 1/2	3.13
1/2	TCI-150FRD*	28427-00	30-150	33.9-210.1	1	1.4	18 1/2	2.84
1/2	TCI-250FRN*	28434-00	50-250	61.0-345.7	1	1.4	21 1/2	3.50
3/4	TCI-600FRN*†	28436-00	120-600	149.1-827.1	2	2.7	44	13.47

*Dual Scale Model: ft.-lb. and Nm graduation. △Heavy duty ratchet head model. †Calibrated right hand only.

Flex Head Ratchet Model

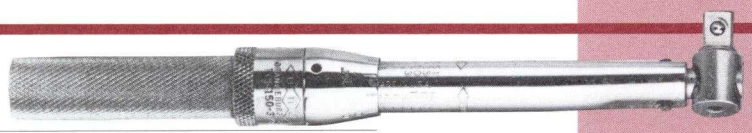
Flex Head Ratchet

ft.-lb. Graduations

Drive Size (in.)	Catalog No.	EDP No.	Range ft.-lb.	Range Nm	Graduations ft.-lb.	Graduations Nm	Length (in.)	Weight (lb.)
1/2	FH-150FRN*	28425-00	30-150	33.9-210.1	1	1.4	19 7/8	3.50

*Dual Scale Model: ft.-lb. and Nm graduations.

Plain Head Models



Plain Head

in.-lb. Graduations

Drive Size (in.)	Catalog No.	EDP No.	Range in.-lb.	Range Nm	Graduations in.-lb.	Graduations Nm	Length (in.)	Weight (lb.)
1/4	TCI-150*	28413-00	30-150	2.82-17.51	1	.1	9	.78
3/8	TCI-150-3/8*	28415-00	30-150	2.82-17.51	1	.1	9	1.19
3/8	TCI-750	28416-00	150-750	—	5	—	13 1/2	1.50
1/2	TCI-750-1/2	28418-00	150-750	—	5	—	13 1/2	2.35
1/2	TCI-1600	28420-00	700-1600	—	10	—	17	2.50

*Dual Scale Model: in.-lb. and Nm graduations.

ft.-lb. Graduations

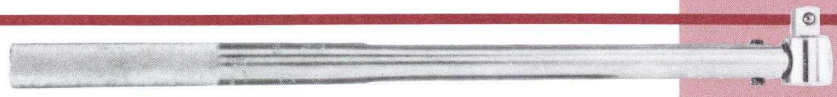
Drive Size (in.)	Catalog No.	EDP No.	Range ft.-lb.	Range Nm	Graduations ft.-lb.	Graduations Nm	Length (in.)	Weight (lb.)
3/8	TCI-75FN*	28428-00	15-75	17.0-105.1	.5	1.4	13 1/2	2.13
1/2	TCI-150FN*	28432-00	30-150	33.9-210.1	1.0	1.4	17	2.72

*Dual Scale Model: ft.-lb. and Nm graduations.

m-kg Graduations

Drive Size (in.)	Catalog No.	EDP No.	Range m-kg	Graduations Nm	Length (in.)	Weight (lb.)
3/8	TCI-8M	28463-00	.5-8	.05	13 1/2	2.10
1/2	TCI-8 1/2M	28465-00	.5-8	.05	13 1/2	2.35
1/2	TCI-20M	28460-00	5-20	.10	17	3.23

Single Setting (Preset) Model



Single Setting (Preset)

- Accurate Plain Head Model.
- Preset to your exact specifications.
- 150 ft.-lb. capacity.

ft.-lb. Graduations

Drive Size (in.)	Catalog No.	EDP No.	Graduations ft.-lb.	Graduations Nm	Length (in.)	Weight (lb.)
3/4	28538	28538-00	150	203.37	26 1/2	3.20

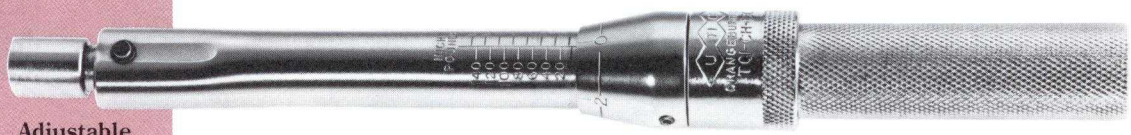
NOTE: Unless otherwise specified, all Utica® micrometer adjustable torque sensing wrenches are calibrated for use in both right and left hand directions.

ANSI and Federal Specifications, to which many Utica®/Bonney® brand products conform, are listed on Page 21.

"Click" Type INTERCHANGEABLE HEAD—"A" SIZE SERIES
Torque Sensing Wrenches

Wrenches

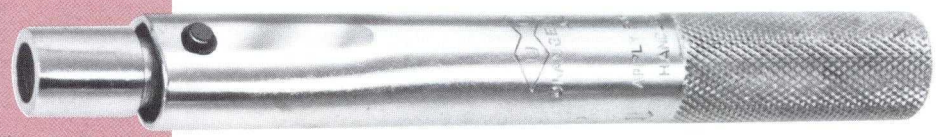
- Accept variety of heads to suit specific application requirements.
- Common center principal allows simple exchange or replacement of heads without need for recalibration.
- Choice of micrometer adjustable or single setting (preset) models with same "click" action and features as Utica® torque wrenches — Page 4.



Adjustable

Micrometer Adjustable Wrench—"A" Size

Catalog No.	EDP No.	Range in.-lb.	Range Nm	Graduations in.-lb.	Length (in.)	Weight (lb.)
CH-150	28551-00	30-150	3.39-16.94	1	9	1.00



Single Setting (Preset)

Single Setting (Preset) Wrenches—"A" Size

Catalog No.	EDP No.	Range in.-lb.	Range ft.-lb.	Range Nm	Range cm-kg	Length (in.)	Weight (lb.)
CHA-5	28511-00	5-100	.5-8	.5-11	3-120	5¾	.28
CHA-7	28512-00	10-200	1.0-17	1.0-22	10-250	7¾	.39

Interchangeable Drive Heads

Plain Square Drive—"A" Size

Drive Size (in.)	Catalog No.	EDP No.
¼	**PS 82**	41253-00
⅜	**PS 122**	41353-00

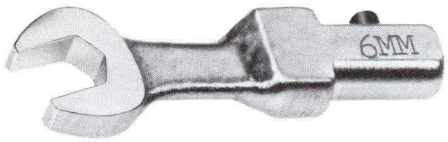
Ratcheting Square Drive—"A" Size

Drive Size (in.)	Catalog No.	EDP No.
¼	**RS 82**	41255-00
⅜	**RS 122**	41355-00

NOTES:

1. "A" series drive heads are not interchangeable with "B" series heads.
2. Drive head sizes or types for "A" series wrenches not displayed in this catalog may be ordered as specials.

ANSI and Federal Specifications, to which many Utica®/Bonney® brand products conform, are listed on Page 21.



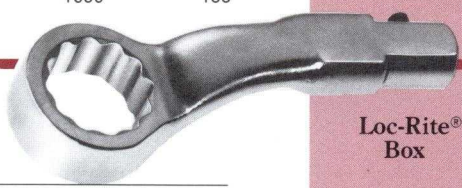
Metric—"A" Size

Opening Size	Catalog No.	EDP No.	Maximum Torque Load Nm	in.-lb.	ft.-lb.
6mm	MO 62	22781-00	7	67	5
7mm	MO 72	22782-00	8	71	6
8mm	MO 82	22783-00	15	133	11
9mm	MO 92	22784-00	21	186	16
10mm	MO 102	22785-00	31	274	23
11mm	MO 112	22786-00	46	407	34
12mm	MO 122	22787-00	49	434	36
13mm	MO 132	22788-00	62	549	46
14mm	MO 142	22789-00	86	761	63
15mm	MO 152	22790-00	104	921	77

Open End

U.S. Standard—"A" Size

Opening Size (in.)	Catalog No.	EDP No.	Maximum Torque Load in.-lb.	ft.-lb.
1/8	OP 42	22708-00	—	—
5/32	OP 52	22710-00	45	4
3/16	OP 62	22712-00	45	4
7/32	OP 72	22714-00	—	—
1/4	OP 82	22716-00	67	6
5/16	OP 102	22720-00	138	12
11/32	OP 112	22722-00	193	16
3/8	OP 122	22724-00	275	23
7/16	OP 142	22728-00	413	34
1/2	OP 162	22732-00	550	46
9/16	OP 182	22736-00	770	64
5/8	OP 202	22740-00	1100	92
11/16	OP 222	22744-00	1375	115
3/4	OP 242	22748-00	1650	138



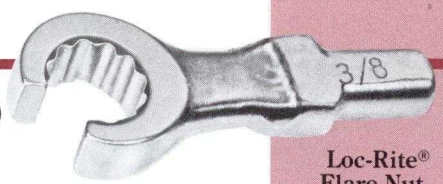
Loc-Rite® Box

Metric—"A" Size

Opening Size	Catalog No.	EDP No.	Maximum Torque Load Nm	in.-lb.	ft.-lb.
6mm	MB 62	22273-00	20	177	15
7mm	MB 72	22274-00	27	239	20
8mm	MB 82	22275-00	30	266	22
9mm	MB 92	22276-00	40	354	30
10mm	MB 102	22277-00	71	628	52
11mm	MB 112	22278-00	80	708	59
12mm	MB 122	22279-00	91	805	67
13mm	MB 132	22280-00	115	1018	85
14mm	MB 142	22281-00	158	1398	117
15mm	MB 152	22282-00	200	1770	148

U.S. Standard—"A" Size

Opening Size (in.)	Catalog No.	EDP No.	Maximum Torque Load in.-lb.	ft.-lb.
7/32	LB 72	24214-00	—	—
1/4	LB 82	24216-00	220	18
5/16	LB 102	24220-00	275	23
3/8	LB 122	24224-00	605	50
7/16	LB 142	24228-00	715	60
1/2	LB 162	24232-00	1020	85
9/16	LB 182	24236-00	1500	125
5/8	LB 202	24240-00	2200	183
11/16	LB 222	24244-00	2640	220
3/4	LB 242	24248-00	2860	238



Loc-Rite® Flare Nut

Adapter

Head Adapter—"A" Size

Catalog No. 28522
EDP No. 28522-00

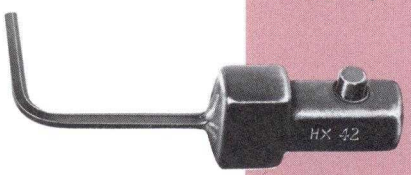
U.S. Standard—"A" Size

Opening Size (in.)	Catalog No.	EDP No.	Maximum Torque Load in.-lb.	ft.-lb.
3/8	LF 122	22224-00	150	13
7/16	LF 142	22228-00	150	13
1/2	LF 162	22232-00	200	17
9/16	LF 182	22236-00	275	23
5/8	LF 202	22240-00	325	27
11/16	LF 222	22244-00	400	33
3/4	LF 242	22248-00	500	42

Hex Keys

U.S. Standard—"A" Size

Opening Size (in.)	Catalog No.	EDP No.	Maximum Torque Load in.-lb.	ft.-lb.
1/16	HX 42	29504-00	10	.8
5/64	HX 52	29505-00	21	2
3/32	HX 62	29506-00	37	3
7/64	HX 72	29507-00	59	5
1/8	HX 82	29508-00	86	7
9/64	HX 92	29509-00	125	10
5/32	HX 102	29510-00	170	14
3/16	HX 122	29512-00	295	25
7/32	HX 142	29514-00	425	35
1/4	HX 162	29516-00	630	53



NOTES:

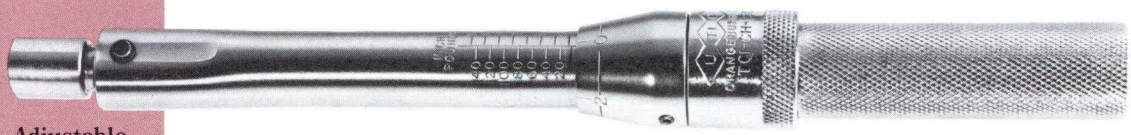
1. "A" series interchangeable heads will not fit "B" series wrenches and "B" series interchangeable heads will not fit "A" series wrenches.
2. Interchangeable head sizes or types for "A" series wrenches not displayed in this catalog may be ordered as specials.

ANSI and Federal Specifications, to which many Utica®/Bonney® brand products conform, are listed on Page 21.

"Click" Type INTERCHANGEABLE HEAD—"B" SIZE SERIES
Torque Sensing Wrenches

Wrenches

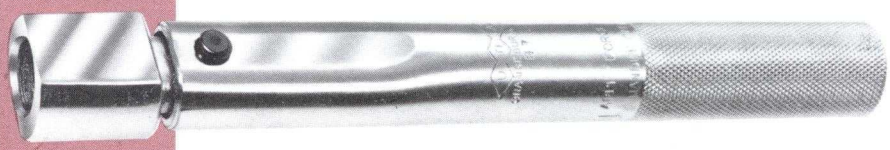
- Designed for higher torque applications than "A" size series.
- Accept a variety of head configurations to suit many fastener requirements.
- Common center principal allows simple exchange or replacement of heads without need for recalibration.
- Choice of micrometer adjustable or single setting (preset) models with same "click" action and features as Utica® torque wrenches — Page 4.



Adjustable

Micrometer Adjustable Wrench—"B" Size

Catalog No.	EDP No.	Range ft.-lb.	Range Nm	Graduations Nm	Graduations ft.-lb.	Length (in.)	Weight (lb.)
CH-75F	28553-00	15-75	20.34-101.69	10.2-105.1	.5	14	2.00
CH-150F	28555-00	30-150	40.67-203.37	20.3-210.1	1.0	17⅛	2.50



Single Setting (Preset)

Single Setting (Preset) Wrench—"B" Size

Catalog No.	EDP No.	Range in.-lb.	Range ft.-lb.	Range Nm	Range m-kg	Length (in.)	Weight (lb.)
CHB-7	28513-00	50-500	4-40	5-55	.5-5.5	8¼	.99
CHB-9	28514-00	75-750	6-60	8-85	1.0-8	10½	1.25
CHB-11	28515-00	100-1000	8-80	11-110	1.0-11	12½	1.50
CHB-13	28516-00	150-1500	12-125	17-170	2.0-17	14¼	1.73
CHB-15	28517-00	200-2000	16-166	22-225	3.0-23	16¼	1.91

NOTE: Single setting wrenches do not have a scale and must be set on a torque tester. *When ordering these preset tools, specify desired torque setting.*

Interchangeable Drive Heads

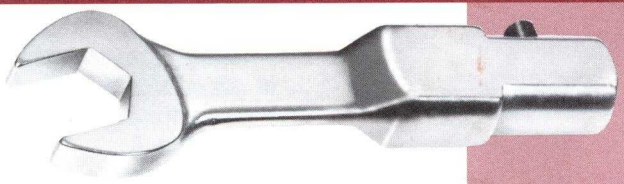
Ratcheting Square Drive—"B" Size

Drive Size (in.)	Catalog No.	EDP No.
⅜	**RS 124**	41356-00
½	**RS 164**	41456-00

NOTES:

1. "B" series drive heads are not interchangeable with "A" series heads.
2. Drive head sizes or types for "B" series wrenches not displayed in this catalog may be ordered as specials.

ANSI and Federal Specifications, to which many Utica®/Bonney® brand products conform, are listed on Page 21.



Open End

Metric—"B" Size

Opening Size	Catalog No.	EDP No.	Maximum Torque Load Nm	in.-lb.	ft.-lb.
12mm	MO 124	22781-10	49	434	36
13mm	MO 134	22782-10	62	549	46
14mm	MO 144	22783-10	86	761	63
15mm	MO 154	22784-10	104	921	77
16mm	MO 164	22785-10	124	1098	92
17mm	MO 174	22786-10	139	1230	103
18mm	MO 184	22787-10	155	1372	114
19mm	MO 194	22788-10	186	1646	137
20mm	MO 204	22789-10	217	1921	160
22mm	MO 224	22790-10	279	2469	206

U.S. Standard—"B" Size

Opening Size (in.)	Catalog No.	EDP No.	Maximum Torque Load in.-lb.	ft.-lb.
1/2	OP 164	22732-10	550	46
9/16	OP 184	22736-10	770	64
5/8	OP 204	22740-10	1100	92
11/16	OP 224	22744-10	1375	115
3/4	OP 244	22748-10	1650	138
13/16	OP 264	22752-10	2200	183
7/8	OP 284	22756-10	2475	206
15/16	OP 304	22760-10	3025	252
1	OP 324	22764-10	3575	298
1 1/16	OP 344	22768-10	3850	321
1 1/8	OP 364	22772-10	4400	367
1 3/16	OP 384	22776-10	—	—
1 1/4	OP 404	22780-10	—	—

Loc-Rite® Box

Metric—"B" Size

Opening Size	Catalog No.	EDP No.	Maximum Torque Load Nm	in.-lb.	ft.-lb.
12mm	MB 124	22273-10	91	805	67
13mm	MB 134	22274-10	115	1018	85
14mm	MB 144	22275-10	158	1398	117
15mm	MB 154	22276-10	200	1770	148
16mm	MB 164	22277-10	248	2195	183
17mm	MB 174	22278-10	267	2363	197
18mm	MB 184	22279-10	304	2691	224
19mm	MB 194	22280-10	323	2859	238
20mm	MB 204	22281-10	347	3071	256
22mm	MB 224	22282-10	408	3611	301

U.S. Standard—"B" Size

Opening Size (in.)	Catalog No.	EDP No.	Maximum Torque Load in.-lb.	ft.-lb.
1/2	LB 164	24232-10	1020	85
9/16	LB 184	24236-10	1500	125
5/8	LB 204	24240-10	2200	183
11/16	LB 224	24244-10	2640	220
3/4	LB 244	24248-10	2860	238
13/16	LB 264	24252-10	3300	275
7/8	LB 284	24256-10	3630	303
15/16	LB 304	24260-10	4510	376
1	LB 324	24264-10	5390	449
1 1/16	LB 344	24268-10	5940	495
1 1/8	LB 364	24272-10	6490	541

Loc-Rite® Flare Nut

U.S. Standard—"B" Size

Opening Size (in.)	Catalog No.	EDP No.	Maximum Torque Load in.-lb.	ft.-lb.
1/2	LF 164	22232-10	200	17
9/16	LF 184	22236-10	275	23
5/8	LF 204	22240-10	325	27
11/16	LF 224	22244-10	400	33
3/4	LF 244	22248-10	500	42
7/8	LF 284	22256-10	800	67
1	LF 324	22264-10	—	—
1 1/8	LF 364	22272-10	—	—

NOTES:

1. "B" series interchangeable heads will not fit "A" series wrenches and "A" series interchangeable heads will not fit "B" series wrenches.
2. Interchangeable head sizes or types for "B" series wrenches not displayed in this catalog may be ordered as specials.

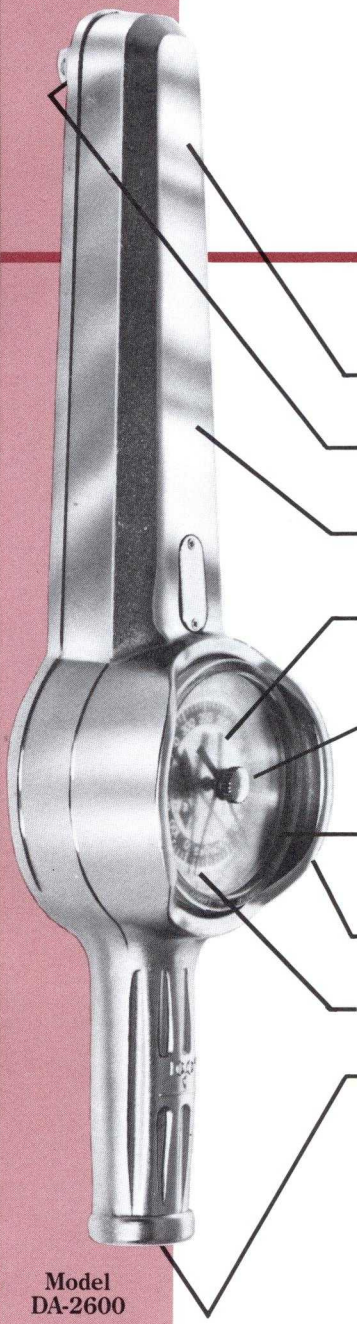
Head Adapter—"B" Size

Catalog No. 28523
EDP No. 28523-00

Adapter

Dial Indicating Torque Wrenches

- ***Ideal for engineering, quality control, inspection and laboratory applications in which exact torque readings are necessary.***
- ***Allow determination of applied right or left hand torque with accuracy of ±4% in either direction. Accuracy of ±2% available on special order.***
- ***Torque is indicated on round, instrument type dial. Permits precise, uniform control during fastening or measuring.***
- ***Dual dial scale gives readings in U.S. Standard or metric.***
- ***Capacities from 30 in.-lb. (35 cm-kg) to 600 ft.-lb. (80 m-kg).***
- ***Drive sizes ¼" through ¾".***



Model DA-2600

Features

- Slim drive end allows use in tight work areas.
- Sturdy integral indicator guards reduce potential for crystal breakage.
- Parallax correcting mirror gives correct dial readout from any position. When reading dial at an angle, the true torque reading is halfway between pointer and pointer reflections.
- One-piece crystal and bezel is injection-molded for increased strength and reliability as compared to conventional multiple-piece crystal designs.
- Counterbalanced indicating mechanism maintains accuracy by keeping pointer from "dropping off" when wrench is turned from horizontal to vertical position. Patented design.
- Handle extension bore allows use with extensions to apply load anywhere. Unique construction assures same accuracy regardless of point of load application. **NOTE:** See CAUTIONS – Page 3.
- Precision die cast housing, with glare-free, instrument type finish, is rugged and durable.
- Plastic bushing on most models seals interior and gives low-friction operation.
- Plastic bushing on most models seals interior and gives low-friction operation.
- Memory Indicator locks on previous reading.

in.-lb./cm-kg Scale

Drive Size (in.)	Catalog No.	EDP No.	Range in.-lb.	Range cm-kg	Graduations in.-lb.	Graduations cm-kg	Weight (lb.)
¼	DA 130M	28634-00	0-30	0-35	.5	1	1.81
¼	DA 175M	28635-00	0-75	0-90	1.0	2	1.84
⅜	DA 2150M	28636-00	0-150	0-175	2.0	5	1.88
⅜	DA 2300M	28637-00	0-300	0-350	5.0	10	1.94
⅜	DA 2600	28611-00	0-600	0-700	10.0	20	2.03
⅜	DA 2600M	28621-00	0-600	0-700	10.0	20	2.03
⅜	DA 250FM	28639-00	0-50 (ft.-lb.)	0-7 (m-kg)	1 (ft.-lb.)	2 (m-kg)	1.98

ft.-lb./m-kg Scale

Drive Size (in.)	Catalog No.	EDP No.	Range ft.-lb.	Range m-kg	Graduations ft.-lb.	Graduations m-kg	Weight (lb.)
½	DA 3100FM	28628-00	0-100	0-15	2	.5	3.25
½	DA 3175FM	28623-00	0-175	0-25	5	.5	6.68
½	DA 3250FM	28624-00	0-250	0-35	5	1.0	5.50
¾	DA 4350FM	28629-00	0-350	0-50	10	1.0	12.41
¾	DA 4600FM	28626-00	0-600	0-80	10	2.0	11.00

Dial Wrench With Protective Wire Cage

(protects crystal and dial from damage)

Drive Size (in.)	Catalog No.	EDP No.	Range ft.-lb.	Graduations ft.-lb.	Weight (lb.)
¾	DA 4350FMPC	28662-00	0-350	10	7.00

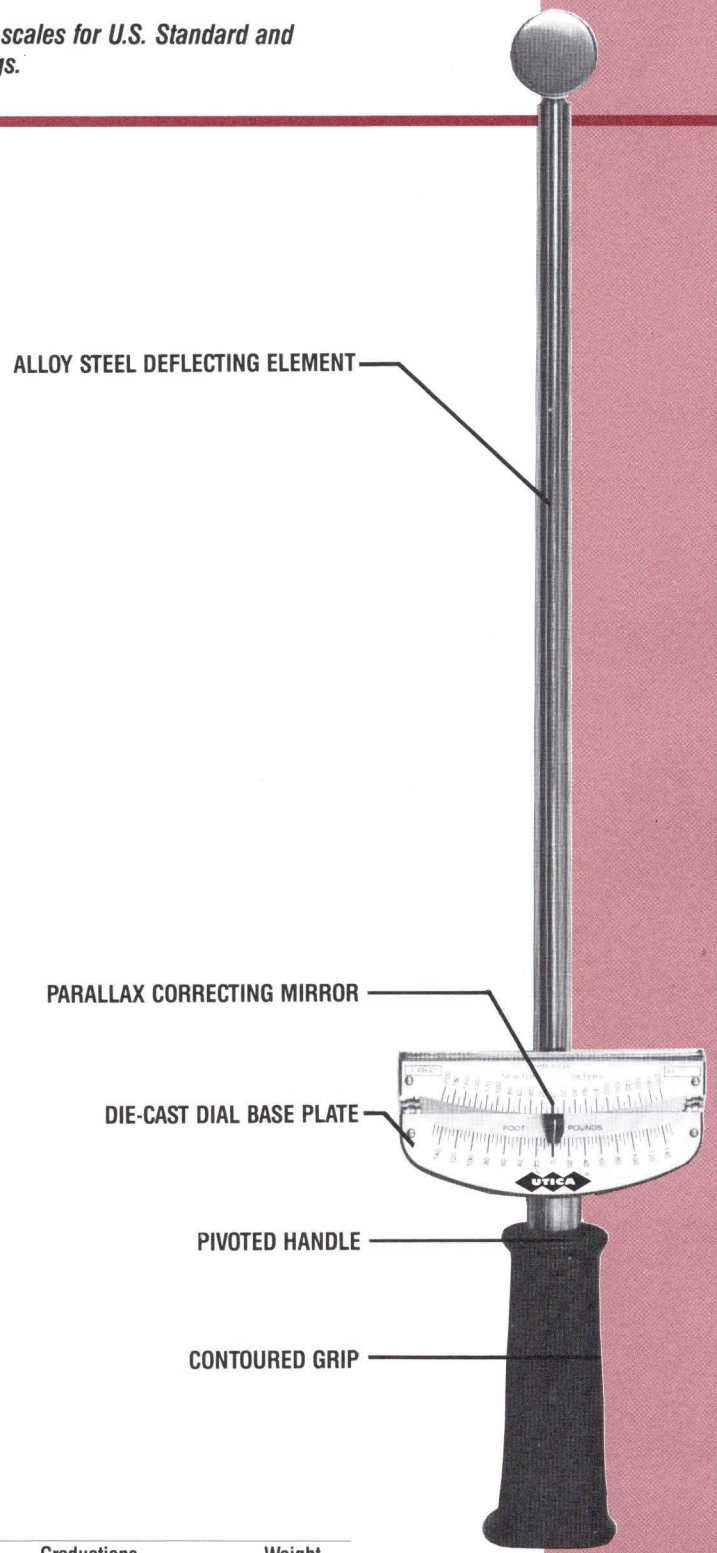
ANSI and Federal Specifications, to which many Utica®/Bonney® brand products conform, are listed on Page 21.

"B" SERIES Beam Type Torque Wrenches

- ***The most economical and reliable torque tool for general use.***
- ***Measures torque in both right and left hand directions.***
- ***Features dual scales for U.S. Standard and metric readings.***

Features

- Contoured plastic grip reduces operator fatigue and has special hand guard which keeps hand from slipping into indicator plate.
- Parallax correcting mirror allows scale to be read correctly from almost any position.
- Pivoted handle transmits load to deflecting element in the exact position for which the wrench was calibrated.
- Die-cast dial base plate with integral pointer guard maximizes tool life.
- Alloy steel deflecting element, head and pointer are heat-treated, polished and plated for corrosion resistance and extended life.



ft.-lb./m-kg Scale

Drive Size (in.)	Catalog No.	EDP No.	Range ft.-lb.	Range m-kg	Graduations ft.-lb.	Graduations m-kg	Weight (lb.)
3/8	**B 2600**	28909-00	0-600 (in.-lb.)	0-700 (cm-kg)	25 (in-lb.)	25 (cm-kg)	1.25
1/2	**B 3150F**	28901-00	0-150	0-20	5	1	2.13

Model B-3150F

ANSI and Federal Specifications, to which many Utica®/Bonney® brand products conform, are listed on Page 21.

Torque Limiting Screwdrivers STANDARD MODELS
And Accessories

- ***High reliability for precise tightening of small threaded fasteners. Ideal for higher torque applications in general electronic and computer assembly.***
- ***Prevent over-torquing. When set torque is reached, screwdriver mechanism automatically free-wheels to prevent further tightening.***
- ***Limit torque in both right and left hand directions.***
- ***Choice of adjustable models with precision micrometer scale or factory preset models.***
- ***U.S. Standard or metric scales.***
- ***Meet all requirements of Military Specification MIL-W-26497.***

U.S. Patent 3,119,247

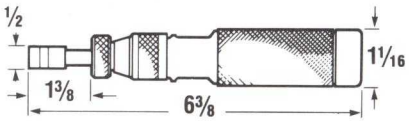
Adjustable Model No. TS-30

Features

- All-aluminum housing is lightweight and durable.
- Precision micrometer scale (adjustable models) calibrated in inch-ounces or inch-pounds. Metric models: cm-kg.
- Spring-loaded locking collar automatically locks in and maintains desired torque setting.
- Easy-release bit holders securely retain bits during operation while permitting easy removal.
- Anti-backlash design.

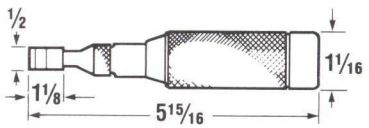
Preset Model No. TS-SN-2

Preset models are designed for highly repetitive assembly line operations.



Adjustable Models

Catalog No.	EDP No.	Range	Increments	Hex Drive	Wt. (lb.)
U.S. Standard					
TS-100	28712-00	2 to 100 in.-oz.	2 in.-oz.	1/4 Female	.50
TS-30	28710-00	1 to 30 in.-lb.	1 in.-lb.	1/4 Female	.50
TS-35	28711-00	1 to 36 in.-lb.	1 in.-lb.	1/4 Female	.50
Metric					
TS-30CM	28704-00	2.5-30 cm-kg	.5 cm-kg	1/4 Female	.50

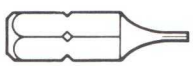


Preset Models

Catalog No.	EDP No.	Range in.-oz.	Range in.-lb.	Range Nm	Range cm-kg	Hex Drive
TS-SN-1	28714-00	10-150	1-10	.1-1.1	1-12	1/4 Female
TS-SN-2	28716-00	64-640	4-40	.5-4.5	5-45	1/4 Female

NOTE: When ordering preset tools, specify desired torque setting.

Standard Accessories

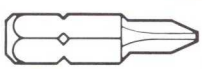


Hex Keys

Catalog No.	EDP No.	Hex Size	Cap Screw Size	Set Screw Size	Flathead Screw Size
HW-1	28719-03	050	0	3,4	1,2
HW-2	28719-04	1/16	1	5,6	3,4
HW-3	28719-05	5/64	2,3	8	5,6
HW-4	28719-06	3/32	4,5	10	8
HW-4A	28719-07	7/64	6	—	—
HW-5	28719-08	1/8	—	1/4	10
HW-5A	28719-09	9/64	8	—	—
HW-6	28719-10	5/32	10	5/16	1/4
HW-7	28719-12	3/16	1/4	3/8	—

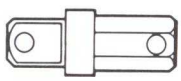
Screwdriver Bits

Catalog No.	EDP No.	Blade Width	Blade Thick.	Screw Size
HW-11	28726-02	.134	.028	2,3
HW-11A	28726-03	.155	.030	3,4
HW-12	28726-04	.185	.034	4,5
HW-13	28726-05	.214	.036	5,6
HW-14	28726-06	.250	.040	6,8



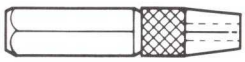
Phillips Bits

Catalog No.	EDP No.	Point Size	Screw Size
HW-15	28727-10	0	0,1
HW-16	28727-11	1	2,3,4
HW-17	28727-12	2	5,6,7,8,10
HW-17A	28727-13	3	12,14



Square Drive Adapter

Catalog No.	EDP No.	Description
HW-18	28728-00	1/4 Hex to 1/4 Square. For use with Hex Sockets "W" series and all regular sockets with 1/4 square female drive.



Miniature Bit Holder

Catalog No.	EDP No.	Description
HW-19	28729-00	To adapt all light duty accessories for use in heavy duty models.

ANSI and Federal Specifications, to which many Utica®/Bonney® brand products conform, are listed on Page 21.

Torque Limiting Screwdrivers And Accessories

- ***Specifically designed for reliable tightening of the very smallest threaded fasteners.***
- ***Largest model weighs only 1 oz.***
- ***Operate in same manner as standard models — reach set torque and free-wheel to prevent over-torquing of delicate components.***
- ***Control mechanism engages and disengages 4 times during each handle revolution in right or left hand direction.***
- ***Choice of micrometer adjustable or factory preset models.***
- ***U.S. Standard or metric scales.***

Model No. TT-1

Adjustable Models

Catalog No.	EDP No.	Range	Increments	Drive	Length (in.)	Weight (lb.)
U.S. Standard						
TT-1	28701-00	.25-20 in.-oz.	1/4 in.-oz.	Univ.	3 5/8	.06
Metric						
TT-1CM	28705-00	1.0-1.5 cm-kg	.02 cm-kg	Univ.	3 5/8	.06

Preset Models

Catalog No.	EDP No.	in-oz.	Range Nm	cm-kg	Drive	Length	Weight (lb.)
TT-SN-1	28702-00	1-30	.07-2.0	.1-2	Univ.	3 5/8	.06

NOTE: When ordering preset tools, specify desired torque setting.

Screwdriver Bits

Catalog No.	EDP No.	Blade Width	Blade Thick.	Screw Size
TW-0	28706-00	.040	.008	0000,000
TW-1	28706-01	.055	.010	0000,000
TW-2	28706-02	.070	.012	000,00
TW-3	28706-03	.080	.015	00,0,1
TW-4	28706-04	.100	.015	0,1,2

Hex Sockets

Catalog No.	EDP No.	Hex Size	Screw Size	Nut Size
TW-5	28708-05	5/64	000,00	000,00
TW-6	28708-06	3/32	0	—
TW-7	28708-07	7/64	1	—
TW-8	28708-08	1/8	2	—
TW-9	28708-09	5/32	—	0,1

Phillips Bits

Catalog No.	EDP No.	Point Size	Screw Size
TW-10	28707-10	0	0,1
TW-11	28707-11	1	2,3,4

Hex Keys

Catalog No.	EDP No.	Hex Size	Cap Screw Size	Set Screw Size	Flat Head Screw
TW-12	28709-12	.028	—	0	—
TW-13	28709-13	.035	—	1,2	0
TW-14	28709-14	.050	0	3,4	1,2
TW-15	28709-15	1/16	1	5,6	3,4
TW-16	28709-16	5/64	2,3	8	5,6

Spline Keys

Catalog No.	EDP No.	Spline Size	No. of Flutes
28715-00	28715-00		4
28715-01	28715-01		4
28715-02	28715-02		6
28715-03	28715-03		6
28715-04	28715-04		6
28715-05	28715-05		6
28715-06	28715-06		4
28715-07	28715-07		6

Universal Bit Holder

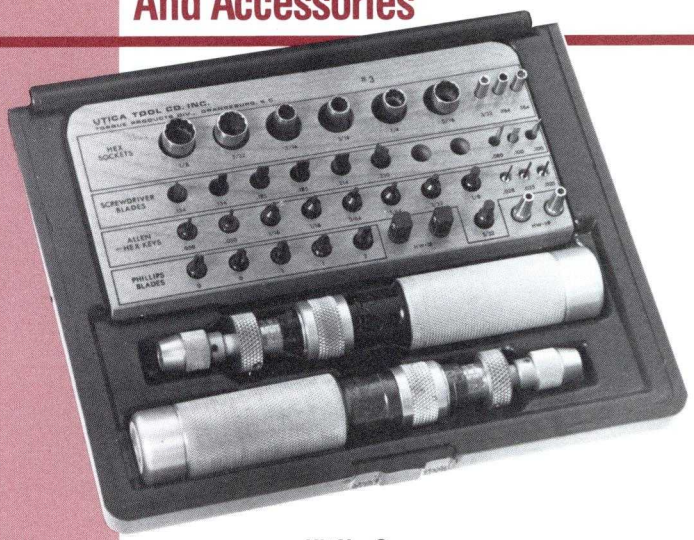
Catalog No.	EDP No.	Description
HW-20	28730-00	This holder can be drilled out to accommodate odd keys and bits. It is also used as an adapter for checking light duty torque screwdrivers on Torque Testers.

CAUTION

1. *Under normal use, periodic recalibration may be necessary to ensure accurate readings and applied torque.*
2. *FOR EXTENDED SPRING LIFE, RETURN TO LOWEST SETTING AFTER EACH USE.*

ANSI and Federal Specifications, to which many Utica®/Bonney® brand products conform, are listed on Page 21.

Torque Limiting Screwdrivers STANDARD AND MINIATURE KITS
And Accessories



Kit No. 3

For complete description of standard kit contents refer to Page 12.

Standard Kits

Catalog No. KIT 1 EDP No. 85001-00

Range 2 to 100 oz.-in. 18 Piece

Qty.	Size or Catalog No.	Description
1 Ea.	**TS-100**	Torque Screwdriver
1 Ea.	.028, .035, .050, 1/16, 5/64	Hex Keys
1 Ea.	3/32, 7/64, 1/8, 3/16	Sockets
1 Ea.	.080, .100, .134, .185	Screwdriver Bits
1 Ea.	0,1	Phillips
1 Ea.	**HW-18, HW-19**	Adapters

Catalog No. KIT 2 EDP No. 85002-00

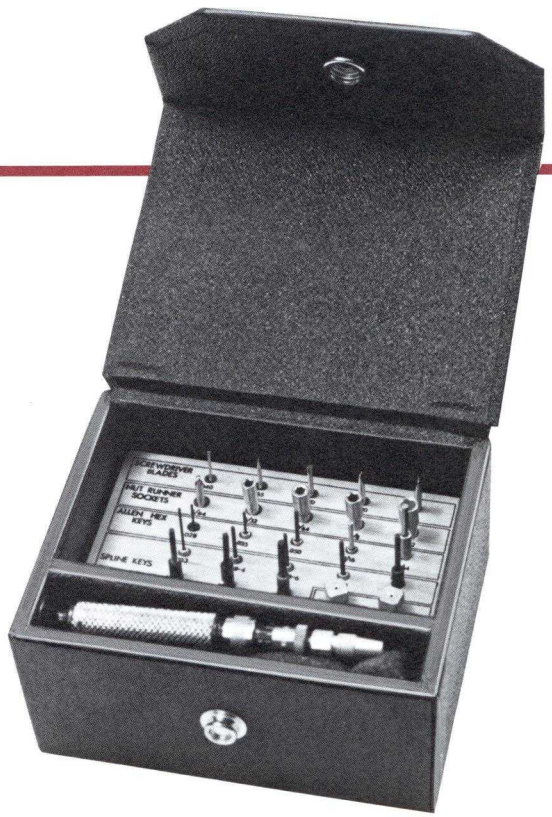
Range 1 to 30 in.-lb. 22 Piece

Qty.	Size or Catalog No.	Description
1 Ea.	**TS-30**	Torque Screwdriver
1 Ea.	.035, .050, 1/16, 5/64, 3/32, 1/8, 5/32	Hex Keys
1 Ea.	7/64, 1/8, 3/16, 1/4, 5/16	Sockets
1 Ea.	.100, .134, .185, .214, .250	Screwdriver Bits
1 Ea.	0,1	Phillips
1 Ea.	**HW-18, HW-19**	Adapters

Catalog No. KIT 3 EDP No. 85003-00

Range 2 in.-oz. to 30 in.-lb. 41 Piece

Qty.	Size or Catalog No.	Description
1 Ea.	**TS-100, TS-30**	Torque Screwdrivers
1 Ea.	.028, 3/32, 1/8, 5/32	Hex Keys
1 Ea.	3/32, 1/8, 5/32, 1/4, 5/16	Sockets
1 Ea.	.080, .214, .250	Screwdriver Bits
1 Ea.	2	Phillips
2 Ea.	.035, .050, 1/16, 5/64	Hex Keys
2 Ea.	7/64, 3/16	Sockets
2 Ea.	.100, .134, .185	Screwdriver Bits
2 Ea.	0,1	Phillips
2 Ea.	**HW-18, HW-19**	Adapters



For complete description of miniature kit contents refer to Page 13.

Miniature Kit

Catalog No. KIT TT-1-4A EDP No. 85005-00

Range .25 to 20 in.-oz. 28 Piece

Qty.	Size or Catalog No.	Description
1 Ea.	**TT-1**	Torque Screwdriver
1 Ea.	.028, .035, .050, 1/16, 5/64	Hex Keys
1 Ea.	5/64, 3/32, 7/64, 1/8, 5/32	Sockets
1 Ea.	.040, .055, .070, .080, .100	Screwdriver Bits
1 Ea.	0,1	Phillips
1 Ea.	.033-4, 048-4, .048-6, .060-6, .069-6, .072-6, .076-4, .096-6	Spline Keys
2 Ea.	**HW-20**	Adapter

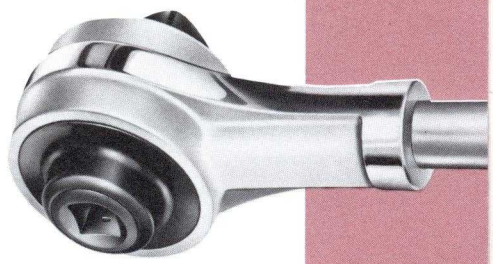
CAUTION

1. *Under normal use, periodic recalibration may be necessary to ensure accurate readings and applied torque.*
2. *FOR EXTENDED SPRING LIFE, RETURN TO LOWEST SETTING AFTER EACH USE.*

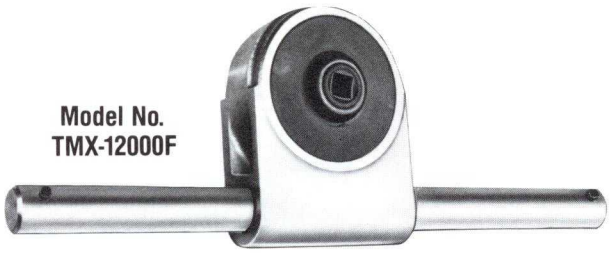
ANSI and Federal Specifications, to which many Utica®/Bonney® brand products conform, are listed on Page 21.

- ***Multiply force to turn fasteners easily when working space is limited and unusually high torque is required.***
- ***Power ratios of 4 to 14 times are available.***
- ***Rugged, precision-manufactured gear wrenches designed for accurate torquing of large fasteners and for generating high power output for loosening "frozen" nuts and bolts.***
- ***Manual torque input from ratchet or torque wrench is multiplied through planetary gearing and applied to the fastener.***
- ***Minimum effort allows one man operation.***

Model No. TMX-1000F



Model No. TMX-4000F



Model No. TMX-12000F

Anti-backlash Device

Built into some models to solve "wind-up" problem encountered when multipliers are used in confined areas. Stores applied turning force so that only a short arc is necessary to complete the torquing process quickly and securely.

NOTE: Input and output rotation is in the same direction. Therefore, rotation of the reaction bar is in the opposite direction. It is necessary that the reaction bar rest securely against a stationary object strong enough to withstand the force being generated. Power loss due to friction in the gear train is approximately 10%.

Torque Multipliers

Catalog No.	EDP No.	Output ft.-lb.	Cap. Nm	Input Drive (in.)	Output Drive (in.)	Gear Ratio	Approx. Weight (lb.)	OAL (in.)
TMX-1000F	93173-00	1000	1350	½	¾	4 to 1	7	22
TMX-2000F	93174-00	2000	2700	¾	1	4 to 1	14	25
TMX-2000FR*	93175-00	2000	2700	¾	1	4 to 1	15	25
TMX-3000F	93176-00	3000	4000	¾	1½	14.3 to 1	30	30
TMX-4000F	93177-00	4000	5400	1	1½	4.33 to 1	30	30
TMX-8000F†	93178-00	8000	10800	1	1½	4.6 to 1	47	32
TMX-12000F†	93179-00	12000	16000	1	2½	6 to 1	73	30

*Anti-backlash Model.
†Available on special order.

- Provides power assist for testing or calibrating higher capacity torque wrenches.
- Accommodates all makes of torque wrenches to 1000 ft.-lb. capacity.

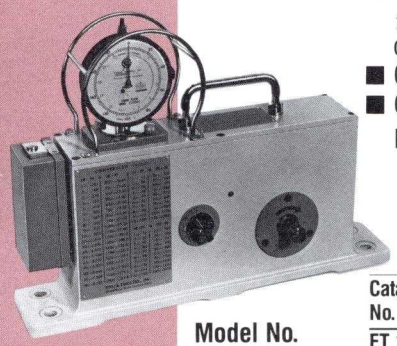
Mechanical Loading Device

Catalog No.	EDP No.	Description
MLT-1200FE	93184-00	Capacity: 1000 ft.-lb. Stroke: 6 inches Power: 110v, 60 cycles, 300 watts

ANSI and Federal Specifications, to which many Utica®/Bonney® brand products conform, are listed on Page 21.

Torque Calibration Equipment TORQUE TESTERS

Cantilever Beam — Type ET (Ultra-Precision)



Model No. ET-2250P

- Checks both right and left hand manually operated torque tools with ranges from 1 in.-oz. to 1000 ft.-lb., 1-1400 Nm.
- Accuracy on standard models ±1%. Accuracy of ±½% over 60% of the range available on special order.
- Conveniently positioned, 360° viewing dial.
- Operates accurately when mounted in any position.
- Maximum input torque retained on dial until reset to zero.
- Accuracy retained through 50,000 cycles at 75% full load with a breakaway (click) type wrench.
- 20% overload factor.
- Portable and lightweight.
- *NBS traceable certification supplied with each tester.*
- Meets or exceeds military specification MIL-T-26639.

English Scales—Type ET

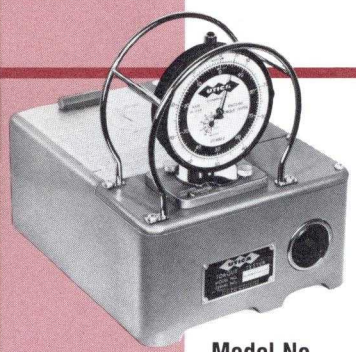
Catalog No.	EDP No.	Range	Graduations	Drives (in.)	Adapters* (in.)
ET 100Z	93101-00	0 to 100 in.-oz.	.1 in.-oz.	¼ Hexagon	¼, ⅜
ET 500Z	93102-00	0 to 500 in.-oz.	.5 in.-oz.	¼ Hexagon	¼, ⅜
ET 250P	93103-00	0 to 250 in.-lb.	.25 in.-lb.	½ Square	¼, ⅜, ½
ET 2000P	93104-00	0 to 2000 in.-lb.	2.0 in.-lb.	½ Square	¼, ⅜, ½
ET 6000PF	93105-00	0 to 6000 in.-lb. 0 to 500 ft.-lb.	5.0 in.-lb. .5 ft.-lb.	1 Square	½, ¾
ET 1000F	93106-00	0 to 1000 ft.-lb.	1.0 ft.-lb.	1 Square	¾, 1
Dual Range Models					
ET 600Z	93107-00	0 to 100 oz.-in. 0 to 500 oz.-in.	.1 oz.-in. .5 oz.-in.	¼ Hexagon ¼ Hexagon	¼, ⅜
ET 2250P	93108-00	0 to 250 in.-lb. 0 to 2000 in.-lb.	.25 in.-lb. 2.0 in.-lb.	½ Square	¼, ⅜, ½

International (Newton Metre) Scales—Type ET

Catalog No.	EDP No.	Range	Graduations	Output Shaft (in.)	Adapters* (in.)
ET-30N	93112-00	0-30 Nm	.05 Nm	½	¼, ⅜, ½
ET-250N	93113-00	0-250Nm	.25 Nm	½	¼, ⅜, ½
ET-700N	93115-00	0-700 Nm	.5 Nm	1	½, ¾
ET-1400N	93114-00	0-1400 Nm	1.0 Nm	1	¾, 1

*NOTE: The adapters are female to female socket type. One end fits the tester drive, the other is the female square of the size listed.

Torsion Bar — Type GT (Precision)



Model No. GT-600Z

- Checks both right and left hand manually operated torque tools with ranges from 1 in.-oz. 500 ft.-lb., 0 to 25 m-kg.
- Accuracy of 1% with resolution comparable to expensive electronic or optical units.
- Indicator dial rotates 360° around stationary axis and is equipped with memory pointer with pushbutton release.
- Durable, simple construction with enclosed compartment for storage of adapters and calibration papers.
- *NBS traceable certification provided with all units.*
- Meets or exceeds military specification MIL-T-26639 (applicable sizes).

English Scales—Type GT

Catalog No.	EDP No.	Range	Graduations	Output Shaft (in.)	Adapters* (in.)
GT-600Z	93121-00	0 to 600 in.-oz.	1.0 in.-oz.	¼ Hex. Male	¼, ⅜
GT-250P	93122-00	0 to 250 in.-lb.	.5 in.-lb.	⅜ Sq. Male	¼, ⅜
GT-1000P	93123-00	0 to 1000 in.-lb.	2.0 in.-lb.	½ Sq. Male	⅜, ½
GT-2000P	93124-00	0 to 2000 in.-lb.	4.0 in.-lb.	½ Sq. Male	⅜, ½
GT-500F	93125-00	0 to 500 ft.-lb.	1.0 ft.-lb.	¾ Sq. Male	½, ¾

Metric Scales—Type GT

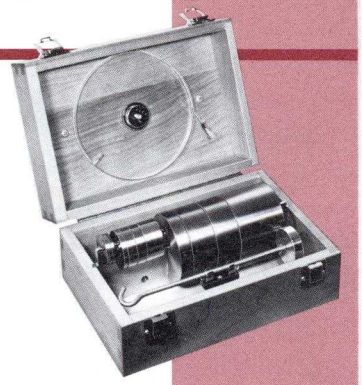
Catalog No.	EDP No.	Range	Graduations	Output Shaft (in.)	Adapters* (in.)
GT-50CM	93127-00	0-50 cm-kg	.1 cm-kg	¼ Hex Male	¼, ⅜
GT-250CM	93128-00	0-250 cm-kg	.5 cm-kg	⅜ Sq. Male	¼, ⅜
GT-1000CM	93129-00	0-1000 cm-kg	2.0 cm-kg	½ Sq. Male	⅜, ½
GT-25M	93130-00	0-25 m-kg	.05 m-kg	½ Sq. Male	⅜, ½

*NOTE: Adapters are female to female socket type. One end fits the tester drive and the other is the female square of size listed.

Note: Torque calibration equipment is only available on special order with 60-day lead time.

ANSI and Federal Specifications, to which many Utica®/Bonney® brand products conform, are listed on Page 21.

UTICA®



Primary Torque Standards

- For use in calibrating torque testers and in conducting other precision torque measurements.
- Consist of a lever arm to which weights are attached to produce torque.
- Utica® primary torque standards are of a radius design to avoid cosine errors, and when used in conjunction with Class C weights (supplied with CTP-500Z) are guaranteed to be accurate to within ±.25%. *NBS traceable.*

Catalog No. CTS-1000F EDP No. 93183-00

Calibration Range: 20 to 1000 ft.-lb., 200 to 12000 in.-lb.
Drives: ½", ¾" and 1" Female Square
Effective Radius: 40"
5 lb. weight holder is included. (Weights not included.)

Calibrates Tester Models:

ET 6000PF	ET 700N	GT 500F
ET 1000F	ET 1400N	GT 25M

Catalog No. CTP-500Z EDP No. 93181-00

Calibration Range: 5 to 505 oz.-in.
Drive: ¼" Female Hexagon
Effective Radius: 2.835"
Weights: All weights are included and are marked with effective torque.

Calibrates Tester Models:

ET 100Z	ET 600Z	GT 50CM
ET 500Z	GT 600Z	

Catalog No. CTS-2000P EDP No. 93182-00

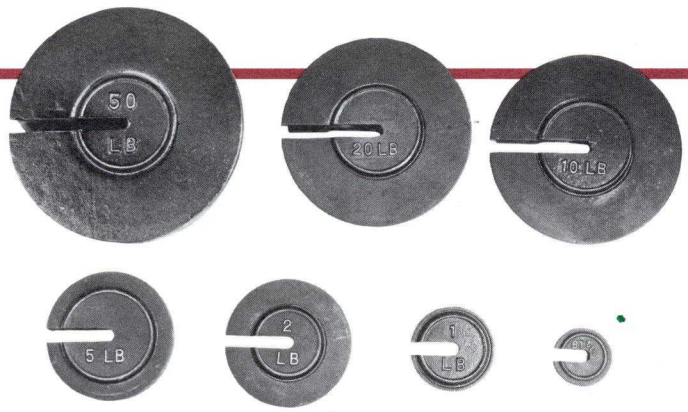
Calibration Range: 20 to 2000 in.-lb.
Drives: ¼", ⅜, ½" Female Square
Effective Radius: 10"
2 lb. weight holder is included. (Weights not included.)

Calibrates Tester Models:

ET 250P	ET 250N	GT 2000P
ET 2000P	GT 250P	GT 250CM
ET 2250P	GT 1000P	GT 1000CM
ET 30N		

Certified Weight Sets

- Cast iron sets certified accurate to Class C tolerance. *NBS traceable.*
- Sets contain selection of weights from ½ through 50 pounds.
- Packaged in sturdy wooden box with convenient carrying handle.



9-Piece Torque Standard Weight Set
Catalog No. WS 1000F EDP No. 93186-00

This weight set is used with standard CTS 1000 F to calibrate testers: ET-6000PF, ET-1000F, GT-500F, GT-25M, ET 700N, ET 1400N.

Weight (lb.)	EDP No.	Quantity	Dia. (in.)	Thickness (in.)
5	93104-50	1	6	13/16
10	93104-51	1	9	13/16
20	93104-52	2	9	1 1/2
50	93104-53	5	11	2 1/8

10-Piece Torque Standard Weight Set
Catalog No. WS-2000P EDP No. 93185-00

This weight set is used with standards to calibrate testers: ET-250P, ET-2000P, ET-2250P, GT-250P, GT-1000P, GT-2000P, GT-250CM, GT-1000CM, ET-30N, ET-250N.

Weight (lb.)	EDP No.	Quantity	Dia. (in.)	Thickness (in.)
½	93104-47	1	2	7/16
1	93104-48	1	4	7/16
2	93104-49	1	6	21/64
5	93104-50	1	6	13/16
10	93104-51	1	9	13/16
20	93105-52	2	9	1 1/2
50	93104-53	3	11	2 1/8

12-Piece Torque Standard Weight Set
Catalog No. WS 1500PF EDP No. 93187-00

This weight set is used with Torque Standards CTS-1000F and CTS-2000P and contains all the weight necessary to calibrate all Utica® inch-pound, foot-pound and Newton Metre torque testers.

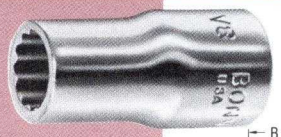
Weight (lb.)	EDP No.	Quantity	Dia. (in.)	Thickness (in.)
½	93104-47	1	2	7/16
1	93104-48	1	4	7/16
2	93104-49	1	6	21/64
5	93104-50	1	6	13/16
10	93104-51	1	9	13/16
20	93104-52	2	9	1 1/2
50	93104-53	5	11	2 1/8

Note: Torque calibration equipment is only available on special order with 60-day lead time.

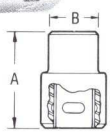
ANSI and Federal Specifications, to which many Utica®/Bonney® brand products conform, are listed on Page 21.

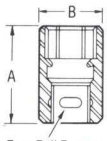
Loc-Rite® Socket Accessories

¼" SQUARE DRIVE, REGULAR & DEEP
⅜" SQUARE DRIVE, REGULAR SOCKETS



¼" Regular Length



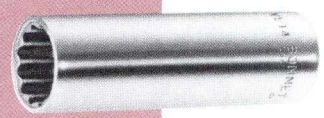


Four-Ball Recess Design Allows Quick Attachment To Drive Tools

12-Lobe Loc-Rite® —U.S. Standard

Opening Size (in)	Catalog No.	EDP No.	A (in)	A (mm)	B (in)	Weight (lb)
1/8	VH-4*	31204-06	7/8	22.0	3/16	.02
5/32	VH-5*	31205-06	7/8	22.0	1/4	.02
3/16	V-6	32006-01	7/8	22.0	19/64	.02
7/32	V-7	32007-01	7/8	22.0	11/32	.03
1/4	V-8	32008-01	7/8	22.0	3/8	.03
9/32	V-9	32009-01	7/8	22.0	13/32	.03
5/16	V-10	32010-01	7/8	22.0	29/64	.03
11/32	V-11	32011-01	7/8	22.0	1/2	.03
3/8	V-12	32012-01	7/8	22.0	17/32	.03
7/16	V-14	32014-01	7/8	22.0	5/8	.05
1/2	V-16	32016-01	7/8	22.0	3/4	.05
9/16	V-18	32018-01	7/8	22.0	49/64	.05

*6-Point Socket

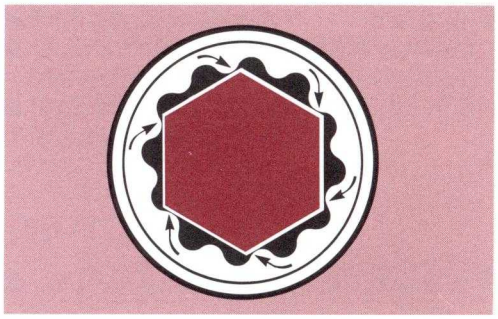


¼" Deep Sockets

12-Lobe Loc-Rite® —U.S. Standard

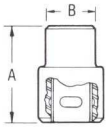
Opening Size (in)	Catalog No.	EDP No.	A (in)	A (mm)	B (in)	Weight (lb)
3/16	VL-6	32006-02	2	50.8	19/64	.03
7/32	VL-7	32007-02	2	50.8	11/32	.04
1/4	VL-8	32008-02	2	50.8	3/8	.04
9/32	VL-9	32009-02	2	50.8	27/64	.04
5/16	VL-10	32010-02	2	50.8	29/64	.05
11/32	VL-11	32011-02	2	50.8	1/2	.06
3/8	VL-12	32012-02	2	50.8	17/32	.07
7/16	VL-14	32014-02	2	50.8	5/8	.09
1/2	VL-16	32016-02	2	50.8	47/64	.11

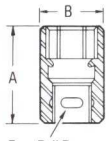
Loc-Rite®: The Unique 12-Lobe Wrench and Drive Socket Design That Saves Fasteners and Fittings



- Designed for use on either 6 or 12-point fasteners.
- Prevents *rounding* and deforming of hex cap screw heads, nuts, and fittings because it does not depend on hex points for turning.
- Produces accurate torque/tension relationship.
- Allows removal of hex bolts, nuts, and fittings when points have been damaged by conventional wrenches.
- Reduces potential for hydraulic, pneumatic, or gas leakage caused by distortion of fasteners or fittings.

⅜" Regular Length





Four-Ball Recess Design Allows Quick Attachment To Drive Tools

12-Lobe Loc-Rite® —U.S. Standard

Opening Size (in)	Catalog No.	EDP No.	A (in)	A (mm)	B (in)	Weight (lb)
1/4	T-8	33208-01	1	25.4	25/64	.04
5/16	T-10	33210-01	1	25.4	15/32	.05
11/32	T-11	33211-01	1	25.4	1/2	.05
3/8	T-12	33212-01	1	25.4	35/64	.05
7/16	T-14	33214-01	1	25.4	5/8	.05
1/2	T-16	33216-01	1	25.4	11/16	.05
9/16	T-18	33218-01	1	25.4	25/32	.07
5/8	T-20	33220-01	1	25.4	27/32	.08
11/16	T-22	33222-01	1 1/32	26.2	15/16	.10
3/4	T-24	33224-01	1 1/16	27.0	1	.11
13/16	T-26	33226-01	1 1/8	28.6	1 1/16	.13
7/8	T-28	33228-01	1 3/16	30.2	1 3/16	.19
15/16	T-30	33230-01	1 3/8	34.7	1 1/4	.21
1	T-32	33232-01	1 3/8	34.7	1 11/32	.23

12-Lobe Loc-Rite® —Metric

Opening Size	Catalog No.	EDP No.	A (in)	A (mm)	B (in)	Weight (lb)
7mm	MT-7	32307-08	1	25.4	13/32	.03
8mm	MT-8	32308-08	1	25.4	15/32	.03
9mm	MT-9	32309-08	1	25.4	1/2	.04
10mm	MT-10	32310-08	1	25.4	9/16	.04
11mm	MT-11	32311-08	1	25.4	5/8	.04
12mm	MT-12	32312-08	1	25.4	11/16	.04
13mm	MT-13	32313-08	1	25.4	11/16	.04
14mm	MT-14	32314-08	1	25.4	25/32	.04
15mm	MT-15	32315-08	1	25.4	13/16	.05
16mm	MT-16	32316-08	1	25.4	7/8	.05
17mm	MT-17	32317-08	1	25.4	59/64	.06
18mm	MT-18	32318-08	1 7/32	30.9	1	.07

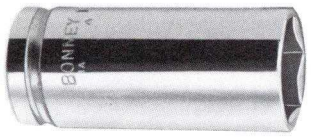
6-Point—U.S. Standard

Opening Size (in)	Catalog No.	EDP No.	A (in)	A (mm)	B (in)	Weight (lb)
1/4	TH-8	31308-06	1	25.4	25/64	.04
5/16	TH-10	31310-06	1	25.4	15/32	.05
3/8	TH-12	31312-06	1	25.4	35/64	.05
7/16	TH-14	31314-06	1	25.4	5/8	.05
1/2	TH-16	31316-06	1	25.4	47/64	.05
9/16	TH-18	31318-06	1	25.4	25/32	.07
5/8	TH-20	31320-06	1	25.4	27/32	.08
11/16	TH-22	31322-06	1 1/32	26.2	15/16	.10
3/4	TH-24	31324-06	1 1/16	27.0	1	.11

6-Point—Metric

Opening Size	Catalog No.	EDP No.	A (in)	A (mm)	B (in)	Weight (lb)
7mm	MTH-7	35307-06	1	25.4	7/16	.06
8mm	MTH-8	35308-06	1	25.4	31/64	.06
9mm	MTH-9	35309-06	1	25.4	33/64	.05
10mm	MTH-10	35310-06	1	25.4	19/32	.05
11mm	MTH-11	35311-06	1	25.4	21/32	.05
12mm	MTH-12	35312-06	1	25.4	11/16	.06
13mm	MTH-13	35313-06	1	25.4	23/32	.05
14mm	MTH-14	35314-06	1	25.4	25/32	.07
15mm	MTH-15	35315-06	1	25.4	13/16	.08
16mm	MTH-16	35316-06	1	25.4	7/8	.08
17mm	MTH-17	35317-06	1	25.4	59/64	.10
18mm	MTH-18	35318-06	1	25.4	61/64	.11
19mm	MTH-19	35319-06	1	25.4	1	.11

ANSI and Federal Specifications, to which many Utica®/Bonney® brand products conform, are listed on Page 21.



6-Point—U.S. Standard

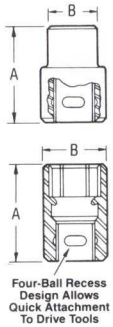
Opening Size (in)	Catalog No.	EDP No.	A (in)	A (mm)	B (in)	Weight (lb)
3/8	TLH-12	31312-07	1 3/4	44.5	35/64	.06
7/16	TLH-14	31314-07	2	50.8	5/8	.09
1/2	TLH-16	31316-07	2	50.8	11/16	.12
9/16	TLH-18	31318-07	2	50.8	49/64	.13
5/8	TLH-20	31320-07	2 1/4	57.2	55/64	.19
11/16	TLH-22	31322-07	2 1/2	63.5	59/64	.22
3/4	TLH-24	31324-07	2 1/2	63.5	1	.26
13/16	TLH-26	31326-07	2 3/4	69.9	15/64	.27

6-Point—Metric

Opening Size	Catalog No.	EDP No.	A (in)	A (mm)	B (in)	Weight (lb)
9mm	MTLH-9	35309-07	2	50.8	33/64	.08
10mm	MTLH-10	35310-07	2	50.8	19/32	.08
11mm	MTLH-11	35311-07	2	50.8	21/32	.08
12mm	MTLH-12	35312-07	2	50.8	43/64	.09
13mm	MTLH-13	35313-07	2	50.8	23/32	.10
14mm	MTLH-14	35314-07	2	50.8	25/32	.13
15mm	MTLH-15	35315-07	2	50.8	13/16	.15
16mm	MTLH-16	35316-07	2	50.8	7/8	.19
17mm	MTLH-17	35317-07	2	50.8	59/64	.22
18mm	MTLH-18	35318-07	2 1/8	54.1	61/64	.25
19mm	MTLH-19	35319-07	2 1/4	57.2	1	.26

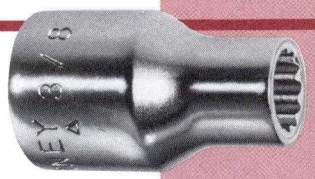
12-Lobe Loc-Rite® —U.S. Standard

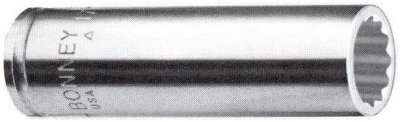
Opening Size (in)	Catalog No.	EDP No.	A (in)	A (mm)	B (in)	Weight (lb)
5/16	TL-10	33210-02	2	50.8	15/32	.07
3/8	TL-12	33212-02	2	50.8	9/16	.08
7/16	TL-14	33214-02	2	50.8	5/8	.08
1/2	TL-16	33216-02	2	50.8	11/16	.10
9/16	TL-18	33218-02	2	50.8	25/32	.13
5/8	TL-20	33220-02	2 1/4	57.2	27/32	.19
11/16	TL-22	33222-02	2 1/2	63.5	59/64	.22
3/4	TL-24	33224-02	2 1/2	63.5	1	.26
13/16	TL-26	33226-02	2 1/2	63.5	1 1/16	.31
7/8	TL-28	33228-02	2 3/4	69.9	15/32	.38



Four-Ball Recess Design Allows Quick Attachment To Drive Tools

3/8" Deep Sockets





12-Lobe Loc-Rite® —U.S. Standard

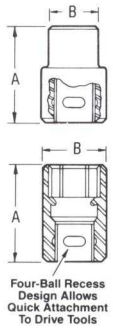
Opening Size (in)	Catalog No.	EDP No.	A (in)	A (mm)	B (in)	Weight (lb)
1/2	AL-16	34216-02	3	76.2	47/64	.29
9/16	AL-18	34218-02	3	76.2	51/64	.27
5/8	AL-20	34220-02	3	76.2	7/8	.23
11/16	AL-22	34222-02	3	76.2	31/32	.27
3/4	AL-24	34224-02	3	76.2	1 1/16	.33
13/16	AL-26	34226-02	3	76.2	1 1/16	.35
7/8	AL-28	34228-02	3	76.2	1 3/16	.45
15/16	AL-30	34230-02	3	76.2	1 1/4	.50
1	AL-32	34232-02	3	76.2	1 11/32	.58
1 1/16	AL-34	34234-02	3	76.2	1 7/16	.71
1 1/8	AL-36	34236-02	3	76.2	1 1/2	.75

6-Point—U.S. Standard

Opening Size (in)	Catalog No.	EDP No.	A (in)	A (mm)	B (in)	Weight (lb)
3/8	ALH-12	31412-07	3	76.2	37/64	.34
7/16	ALH-14	31414-07	3	76.2	23/32	.34
1/2	ALH-16	31416-07	3	76.2	3/4	.34

12-Lobe Loc-Rite® —U.S. Standard

Opening Size (in)	Catalog No.	EDP No.	A (in)	A (mm)	B (in)	Weight (lb)
3/8	A-12	34212-01	1 1/2	38.1	37/64	.11
7/16	A-14	34214-01	1 1/2	38.1	43/64	.11
1/2	A-16	34216-01	1 1/2	38.1	3/4	.12
9/16	A-18	34218-01	1 1/2	38.1	13/16	.12
5/8	A-20	34220-01	1 1/2	38.1	57/64	.13
11/16	A-22	34222-01	1 1/2	38.1	31/32	.16
3/4	A-24	34224-01	1 1/2	38.1	1 3/64	.18
13/16	A-26	34226-01	1 1/2	38.1	1 1/8	.23
7/8	A-28	34228-01	1 17/32	38.9	1 3/16	.24
15/16	A-30	34230-01	1 9/16	39.7	1 1/4	.28
1	A-32	34232-01	1 5/8	41.3	1 11/32	.30
1 1/16	A-34	34234-01	1 3/4	44.5	1 7/16	.39
1 1/8	A-36	34236-01	1 3/4	44.5	1 1/2	.40
1 3/16	A-38	34238-01	1 3/4	44.5	1 5/8	.44
1 1/4	A-40	34240-01	1 3/4	44.5	1 11/16	.47
1 5/16	A-42	34242-01	2 3/16	55.6	1 7/8	.50



Four-Ball Recess Design Allows Quick Attachment To Drive Tools

1/2" Regular and Deep Sockets

CAUTION

1. ***Always wear approved eye protection.***
2. *The sockets and/or attachments shown on these pages are for use only with manually operated ratchets and spinner handles.* ***Do not use with impact wrenches or other power equipment.***

ANSI and Federal Specifications, to which many Utica®/Bonney® brand products conform, are listed on Page 21.

Newton Metre Conversions

From **in.-lb.** to **in.-oz.**

in.-lb.	0 in.-oz.	1 in.-oz.	2 in.-oz.	3 in.-oz.	4 in.-oz.	5 in.-oz.	6 in.-oz.	7 in.-oz.	8 in.-oz.	9 in.-oz.
0	0	16	32	48	64	80	96	112	128	144
10	160	176	192	208	224	240	256	272	288	304
20	320	336	352	368	384	400	416	432	448	464
30	480	496	512	528	544	560	576	592	608	624
40	640	656	672	688	704	720	736	752	768	784
50	800	816	832	848	864	880	896	912	928	944
60	960	976	992	1008	1024	1040	1056	1072	1088	1104
70	1120	1236	1152	1168	1184	1200	1216	1232	1248	1264
80	1280	1296	1312	1328	1344	1360	1376	1392	1408	1424
90	1440	1456	1472	1488	1504	1520	1536	1552	1568	1584
100	1600									

in.-lb. × 16 = in.-oz.

From **in.-oz.** to **in.-lb.**

in.-oz.	0 in.-lb.	1 in.-lb.	2 in.-lb.	3 in.-lb.	4 in.-lb.	5 in.-lb.	6 in.-lb.	7 in.-lb.	8 in.-lb.	9 in.-lb.
0	0	.063	.125	.188	.250	.313	.375	.438	.500	.563
10	.625	.688	.750	.813	.875	.938	1.000	1.063	1.125	1.188
20	1.250	1.313	1.375	1.438	1.500	1.563	1.625	1.688	1.750	1.813
30	1.875	1.938	2.000	2.063	2.125	2.188	2.250	2.313	2.375	2.438
40	2.500	2.563	2.625	2.688	2.750	2.813	2.875	2.938	3.000	3.063
50	3.125	3.188	3.250	3.313	3.375	3.438	3.500	3.563	3.625	3.688
60	3.750	3.813	3.875	3.938	4.000	4.063	4.125	4.188	4.250	4.313
70	4.375	4.438	4.500	4.563	4.625	4.688	4.750	4.813	4.875	4.938
80	5.000	5.063	5.125	5.188	5.250	5.313	5.375	5.438	5.500	5.563
90	5.625	5.688	5.750	5.813	5.875	5.938	6.000	6.063	6.125	6.188
100	6.250									

in.-oz. ÷ 16 = in.-lb.

From **ft.-lb.** to **in.-lb.**

ft.-lb.	0 in.-lb.	1 in.-lb.	2 in.-lb.	3 in.-lb.	4 in.-lb.	5 in.-lb.	6 in.-lb.	7 in.-lb.	8 in.-lb.	9 in.-lb.
0	0	12	24	36	48	60	72	84	96	108
10	120	132	144	156	168	180	192	204	216	228
20	240	252	264	276	288	300	312	324	336	348
30	360	372	384	396	308	420	432	444	456	468
40	480	492	504	516	528	540	552	564	576	588
50	600	612	624	636	648	660	672	684	696	708
60	720	732	744	756	768	780	792	804	816	828
70	840	852	864	876	888	900	912	924	936	948
80	960	972	984	996	1008	1020	1032	1044	1056	1068
90	1080	1092	1104	1116	1128	1140	1152	1164	1176	1188
100	1200									

ft.-lb. × 12 = in.-lb.

From **in.-lb.** to **ft.-lb.**

in.-lb.	0 ft.-lb.	1 ft.-lb.	2 ft.-lb.	3 ft.-lb.	4 ft.-lb.	5 ft.-lb.	6 ft.-lb.	7 ft.-lb.	8 ft.-lb.	9 ft.-lb.
0	0	.083	.167	.250	.333	.417	.500	.583	.667	.750
10	.833	.917	1.000	1.083	1.167	1.250	1.333	1.417	1.500	1.583
20	1.667	1.750	1.833	1.917	2.000	2.083	2.167	2.250	2.333	2.417
30	2.500	2.583	2.667	2.750	2.833	2.917	3.000	3.083	3.167	3.250
40	3.333	3.417	3.500	3.583	3.667	3.750	3.833	3.917	4.000	4.083
50	4.167	4.250	4.333	4.417	4.500	4.583	4.667	4.750	4.833	4.917
60	5.000	5.083	5.167	5.250	5.333	5.417	5.500	5.583	5.667	5.750
70	5.833	5.917	6.000	6.083	6.167	6.250	6.333	6.417	6.500	6.583
80	6.667	6.750	6.833	6.917	7.000	7.083	7.167	7.250	7.333	7.417
90	7.500	7.583	7.667	7.750	7.833	7.917	8.000	8.083	8.167	8.250
100	8.333									

in.-lb. ÷ 12 = ft.-lb.

From **in.-lb.** to **cm-kg**

in.-lb.	0 cm-kg	1 cm-kg	2 cm-kg	3 cm-kg	4 cm-kg	5 cm-kg	6 cm-kg	7 cm-kg	8 cm-kg	9 cm-kg
0	0	1.152	2.304	3.456	4.608	5.760	6.912	8.064	9.217	10.36
10	11.52	12.67	13.83	14.97	16.13	17.28	18.43	19.59	20.74	21.89
20	23.04	24.19	25.35	26.49	27.65	28.80	29.96	31.07	32.26	33.41
30	34.56	35.71	36.87	38.02	39.17	40.32	41.47	42.62	43.77	36.60
40	46.09	47.23	48.39	49.54	50.69	51.85	52.99	54.14	55.29	56.45
50	57.61	58.75	59.90	61.06	62.21	63.37	64.51	65.66	66.81	67.96
60	69.13	70.27	71.42	72.57	73.73	74.89	76.03	77.18	78.33	79.49
70	80.65	81.79	82.94	84.05	85.21	86.41	87.58	88.75	89.91	91.00
80	92.17	93.32	94.49	95.66	96.83	97.93	99.08	100.2	101.4	102.6
90	103.7	104.9	106.1	107.2	108.3	109.5	110.7	111.8	112.9	114.1
100	115.2									

in.-lb. × 1.152 = cm-kg

From **cm-kg** to **in.-lb.**

cm-kg	0 in.-lb.	1 in.-lb.	2 in.-lb.	3 in.-lb.	4 in.-lb.	5 in.-lb.	6 in.-lb.	7 in.-lb.	8 in.-lb.	9 in.-lb.
0	0	.868	1.735	2.603	3.471	4.339	5.206	6.074	6.942	7.809
10	8.677	9.545	10.412	11.280	12.148	13.016	13.883	14.751	15.619	16.486
20	17.354	18.222	19.089	19.957	20.825	21.693	22.560	23.428	24.296	25.163
30	26.031	26.899	27.766	28.634	29.502	30.370	31.237	32.105	32.973	33.840
40	34.708	35.576	36.443	37.311	38.179	39.047	39.914	40.782	41.650	42.517
50	43.385	44.253	45.120	45.988	46.856	47.724	48.591	49.459	50.327	51.194
60	52.062	52.930	53.797	54.665	55.533	56.401	57.268	58.136	59.004	59.871
70	60.739	61.607	62.474	63.342	64.010	65.078	65.945	66.813	67.681	68.548
80	69.416	70.284	71.151	72.019	72.887	73.754	74.622	75.490	76.358	77.225
90	78.093	78.961	79.828	80.670	81.564	82.432	83.299	84.167	85.035	85.902
100	86.770									

cm-kg × .8677 = in.-lb.

From **ft.-lb.** to **m-kg**

ft.-lb.	0 m-kg	1 m-kg	2 m-kg	3 m-kg	4 m-kg	5 m-kg	6 m-kg	7 m-kg	8 m-kg	9 m-kg
0	0	0.138	0.277	0.415	0.553	0.691	0.830	0.968	1.106	1.245
10	1.383	1.521	1.660	1.798	1.936	2.074	2.212	2.351	2.489	2.628
20	2.766	2.904	3.043	3.181	3.319	3.457	3.596	3.734	3.872	4.011
30	4.149	4.287	4.426	4.564	4.702	4.840	4.979	5.117	5.255	5.394
40	5.532	5.670	5.809	5.947	6.085	6.223	6.362	6.500	6.638	6.777
50	6.915	7.053	7.191	7.330	7.468	7.606	7.745	7.883	8.021	8.159
60	8.298	8.436	8.574	8.713	8.851	8.989	9.128	9.266	9.404	9.543
70	9.681	9.819	9.957	10.09	10.23	10.37	10.51	10.65	10.79	10.92
80	11.06	11.20	11.34	11.48	11.62	11.75	11.89	12.03	12.17	12.31
90	12.45	12.59	12.73	12.86	13.00	13.14	13.28	13.42	13.55	13.69
100	13.83									

ft.-lb. × .1383 = m-kg

From **m-kg** to **ft.-lb.**

m-kg	0 ft.-lb.	1 ft.-lb.	2 ft.-lb.	3 ft.-lb.	4 ft.-lb.	5 ft.-lb.	6 ft.-lb.	7 ft.-lb.	8 ft.-lb.	9 ft.-lb.
0	0	7.23	14.47	21.70	28.93	36.17	43.40	50.63	57.86	65.10
10	72.4	79.6	86.8	94.0	101.3	108.5	115.7	123.0	130.2	137.4
20	144.7	151.9	159.1	166.4	173.6	180.8	188.1	195.3	202.5	209.8
30	217.0	224.2	231.5	238.7	245.9	253.2	260.4	267.6	274.9	284.1
40	289.3	296.6	303.9	311.0	318.3	325.5	332.7	340.0	347.2	354.4
50	361.7	368.9	376.1	383.3	390.6	397.8	405.0	412.3	419.5	426.7
60	434.0	441.2	448.4	455.7	462.9	470.1	477.4	484.6	491.8	499.1
70	506.3	513.5	520.8	528.0	535.2	542.5	549.7	556.9	564.2	571.4
80	578.6	585.9	593.1	600.3	607.6	614.8	622.0	629.3	636.5	643.7
90	651.0	658.2	665.4	672.7	679.9	687.1	694.4	701.6	708.8	716.1
100	723.3									

m-kg × 7.233 = ft.-lb.

ANSI and Federal Specifications

Catalog No.	EDP No.	Description	ANSI Specification No.	Federal Specification No.	Military Specification No.	Catalog Page No.
"CLICK" TYPE TORQUE SENSING WRENCHES—MICROMETER ADJUSTABLE						
28538	28538-00	3/4" Drive, Preset Click	B107.14/Type 2, Class B, Style 1			5
FH-150FRN	28425-00	1/2" Drive, Ratchet Click	B107.14/Type 2, Class A, Style 2			5
TCI-75FN	28428-00	3/8" Drive, Plain Head Click	B107.14/Type 2, Class A, Style 1			5
TCI-75FRN	28429-00	3/8" Drive, Ratchet Click	B107.14/Type 2, Class A, Style 2			5
TCI-150	28413-00	1/4" Drive, Plain Head Click	B107.14/Type 2, Class A, Style 1			5
TCI-150-3/8	28415-00	3/8" Drive, Plain Head Click	B107.14/Type 2, Class A, Style 1			5
TCI-150-RA	28414-00	1/4" Drive, Ratchet Click	B107.14/Type 2, Class A, Style 2			5
TCI-150-RA-3/8	28405-00	3/8" Drive, Ratchet Click	B107.14/Type 2, Class A, Style 2			5
TCI-150FN	28432-00	1/2" Drive, Plain Head Click	B107.14/Type 2, Class A, Style 1			5
TCI-150FRD	28427-00	1/2" Drive, Ratchet Click	B107.14/Type 2, Class A, Style 2			5
TCI-150FRN	28433-00	1/2" Drive, Ratchet Click	B107.14/Type 2, Class A, Style 2			5
TCI-250FRN	28434-00	1/2" Drive, Ratchet Click	B107.14/Type 2, Class A, Style 2			5
TCI-250R	28435-00	3/8" Drive, Ratchet Click	B107.14/Type 2, Class A, Style 2			5
TCI-600FRN	28436-00	3/4" Drive, Ratchet Click	B107.14/Type 2, Class A, Style 2			5
TCI-750	28416-00	3/8" Drive, Plain Head Click	B107.14/Type 2, Class A, Style 1			5
TCI-750-1/2	28418-00	1/2" Drive, Plain Head Click	B107.14/Type 2, Class A, Style 1			5
TCI-750R	28417-00	3/8" Drive, Ratchet Click	B107.14/Type 2, Class A, Style 2			5
TCI-750R-1/2	28419-00	1/2" Drive, Ratchet Click	B107.14/Type 2, Class A, Style 2			5
TCI-1600	28420-00	1/2" Drive, Plain Head Click	B107.14/Type 2, Class A, Style 1			5
TCI-1600R	28421-00	1/2" Drive, Ratchet Click	B107.14/Type 2, Class A, Style 2			5
TCI-7250R	28437-00	3/4" Drive, Ratchet Click	B107.14/Type 2, Class A, Style 2			5
DIAL INDICATING TORQUE WRENCHES						
DA130M	28634-00	1/4" Drive, Dial	B107.14/Type 1, Class B, Style 3	GGG-W-686/Type II, Class 1, Style C		10
DA175M	28635-00	1/4" Drive, Dial	B107.14/Type 1, Class B, Style 3	GGG-W-686/Type II, Class 1, Style C		10
DA250FM	28639-00	3/8" Drive, Dial	B107.14/Type 1, Class B, Style 3	GGG-W-686/Type II, Class 1, Style C		10
DA2150M	28636-00	3/8" Drive, Dial	B107.14/Type 1, Class B, Style 3	GGG-W-686/Type II, Class 1, Style C		10
DA2300M	28637-00	3/8" Drive, Dial	B107.14/Type 1, Class B, Style 3	GGG-W-686/Type II, Class 1, Style C		10
DA2600	28611-00	3/8" Drive, Dial	B107.14/Type 1, Class B, Style 1	GGG-W-686/Type II, Class 1, Style A		10
DA2600M	28621-00	3/8" Drive, Dial	B107.14/Type 1, Class B, Style 3	GGG-W-686/Type II, Class 1, Style C		10
DA3100FM	28628-00	1/2" Drive, Dial	B107.14/Type 1, Class B, Style 3			10
DA3175FM	28623-00	1/2" Drive, Dial	B107.14/Type 1, Class B, Style 3	GGG-W-686/Type II, Class 1, Style C		10
DA3250FM	28624-00	1/2" Drive, Dial	B107.14/Type 1, Class B, Style 3			10
DA4350FM	28629-00	3/4" Drive, Dial	B107.14/Type 1, Class B, Style 3	GGG-W-686/Type II, Class 1, Style C		10
DA4350FMPC	28662-00	3/4" Drive, Dial	B107.14/Type 1, Class B, Style 3	GGG-W-686/Type II, Class 1, Style C		10
TORQUE LIMITING SCREWDRIVERS						
TS30	28710-00	1/4" Drive, Screwdriver	B107.14/Type 3, Class A, Style 1, Form B		MIL-W-26497/Type I, Class A, Capacity 3	12
TS35	28711-00	1/4" Drive, Screwdriver	B107.14/Type 3, Class A, Style 1, Form B		MIL-W-26497/Type I, Class A, Capacity 4	12
TS100	28712-00	1/4" Drive, Screwdriver	B107.14/Type 3, Class A, Style 1, Form B		MIL-W-26497/Type I, Class A, Capacity 2	12
TORQUE CALIBRATION EQUIPMENT						
ET100Z	93101-00	1/4" Drive, Torque Tester			MIL-T-26639/Type I, Size 1	16
ET250P	93103-00	1/2" Drive, Torque Tester			MIL-T-26639/Type I, Size 4	16
ET500Z	93102-00	1/4" Drive, Torque Tester			MIL-T-26639/Type I, Size 2	16
ET600Z	93107-00	1/4" Drive, Dual Range Tester			MIL-T-26639/Type II, Size 1	16
ET1000F	93106-00	1" Drive, Torque Tester			MIL-T-26639/Type I, Size 6	16
GT1000P	93123-00	1/2" Drive, Torque Tester			MIL-T-26639/Type I, Size 5	16
ET2000P	93104-00	1/2" Drive, Torque Tester			MIL-T-26639/Type I, Size 5	16
ET2250P	93108-00	1/4" Drive, Dual Range Tester			MIL-T-26639/Type II, Size 2	16
1/4" SQUARE DRIVE SOCKET ACCESSORIES						
V6—V18	32006-01—32018-01	1/4" Drive, 12-Lobe, Regular	B107.1/Class 1, Style A	GGG-W-641/Type II, Class 2, Style A		18
VH4 and VH5	31204-06 and 31205-06	1/4" Drive, 6-Point, Regular	B107.1/Class 1, Style A	GGG-W-641/Type II, Class 1, Style A		18
VL6—VL16	31206-02—31218-02	1/4" Drive, 6-Point, Deep	B107.1/Class 1, Style B	GGG-W-641/Type II, Class 2, Style B		18
3/8" SQUARE DRIVE SOCKET ACCESSORIES						
MT-7—MT-18	32306-08—32322-08	3/8" Drive, 12-Lobe, Regular Metric	B107.5/Class 1, Style A			18
MTH-7—MTH-19	35306-06—35322-06	3/8" Drive, 6-Point, Regular Metric	B107.5/Class 1, Style A			18
MTLH-9—MTLH-19	35306-07—35322-07	3/8" Drive, 6-Point, Deep Metric	B107.5/Class 1, Style B			19
T8—T32	33208-01—33232-01	3/8" Drive, 12-Lobe, Regular	B107.1/Class 1, Style A	GGG-W-641/Type II, Class 2, Style A		18
TH8—TH24	31308-06—31324-06	3/8" Drive, 6-Point, Regular	B107.1/Class 1, Style A	GGG-W-641/Type II, Class 1, Style A		18
TL10—TL28	33210-02—33228-02	3/8" Drive, 12-Lobe, Deep	B107.1/Class 1, Style B	GGG-W-641/Type II, Class 2, Style B		19
TLH12—TLH26	31312-07—31326-07	3/8" Drive, 6-Point, Deep	B107.1/Class 1, Style B	GGG-W-641/Type II, Class 1, Style B		19
1/2" SQUARE DRIVE SOCKET ACCESSORIES						
A12—A42	34212-01—34242-01	1/2" Drive, 12-Lobe, Regular	B107.1/Class 1, Style A	GGG-W-641/Type II, Class 2, Style A		19
AL-16—AL-36	34216-02—34236-02	1/2" Drive, 12-Lobe, Deep	B107.1/Class 1, Style B	GGG-W-641/Type II, Class 2, Style B		19
ALH-12—ALH-16	31412-07—31440-07	1/2" Drive, 6-Point, Deep	B107.1/Class 1, Style B	GGG-W-641/Type II, Class 1, Style B		19

Metric Conversion Chart

M = Millimetres, **DE** = Decimal Equivalents, **F** = Fractional, **DN** = Drill Number

"M"	"DE"	"F"	"DN"	"M"	"DE"	"F"	"DN"	"M"	"DE"	"F"	"DN"	"M"	"DE"	"F"	"DN"	"M"	"DE"	"F"
.1	.0039			1.75	.0689				.1570		22	6.8	.2677			10.72	.4219	27/64
.15	.0059				.0700		50	4.0	.1575			6.9	.2716			11.0	.4330	
.2	.0079			1.8	.0709				.1590		21		.2720		I	11.11	.4375	7/16
.25	.0098			1.85	.0728				.1610		20	7.0	.2756			11.5	.4528	
.3	.0118				.0730		49	4.1	.1614				.2770		J	11.51	.4531	29/64
	.0135		80	1.9	.0748			4.2	.1654			7.1	.2795			11.91	.4687	15/32
.35	.0138				.0760		48		.1660		19		.2811		K	12.0	.4724	
	.0145		79	1.95	.0767			4.25	.1673			7.14	.2812	9/32		12.30	.4843	31/64
.39	.0156	1/64		1.98	.0781	5/64		4.3	.1693			7.2	.2835			12.5	.4921	
.4	.0157				.0785		47		.1695		18	7.25	.2854			12.7	.5000	1/2
	.0160		78	2.0	.0787			4.37	.1719	11/64		7.3	.2874			13.0	.5118	
.45	.0177			2.05	.0807				.1730		17		.2900		L	13.10	.5156	33/64
	.0180		77		.0810		46	4.4	.1732			7.4	.2913			13.49	.5312	17/32
.5	.0197				.0820		45		.1770		16		.2950		M	13.5	.5315	
	.0200		76	2.1	.0827			4.5	.1771			7.5	.2953			13.89	.5469	35/64
	.0210		75	2.15	.0846				.1800		15	7.54	.2968	19/64		14.0	.5512	
.55	.0217				.0860		44	4.6	.1811			7.6	.2992			14.29	.5625	9/16
	.0225		74	2.2	.0866				.1820		14		.3020		N	14.5	.5709	
.6	.0236			2.25	.0885			4.7	.1850		13	7.7	.3031			14.68	.5781	37/64
	.0240		73		.0890		43	4.75	.1870			7.75	.3051			15.0	.5906	
	.0250		72	2.3	.0905			4.76	.1875	3/16		7.8	.3071			15.08	.5937	19/32
.65	.0256			2.35	.0925			4.8	.1890		12	7.9	.3110			15.48	.6094	19/64
	.0260		71		.0935		42		.1910		11	7.94	.3125	5/16		15.5	.6102	
	.0280		70	2.38	.0937	3/32		4.9	.1929			8.0	.3150			15.88	.6250	5/8
.7	.0276			2.4	.0945				.1935		10		.3160		O	16.0	.6299	
	.0292		69		.0960		41		.1960		9	8.1	.3189			16.27	.6406	41/64
.75	.0295			2.45	.0964			5.0	.1968			8.2	.3228			16.5	.6496	
	.0310		68		.0980		40		.1990		8		.3230		P	16.67	.6562	21/32
.79	.0312	1/32		2.5	.0984			5.1	.2008			8.25	.3248			17.0	.6693	
.8	.0315				.0995		39		.2010		7	8.3	.3268			17.06	.6719	43/64
	.0320		67		.1015		38	5.16	.2031	13/64		8.33	.3281	21/64		17.46	.6875	11/16
	.0330		66	2.6	.1024				.2040		6	8.4	.3307			17.5	.6890	
.85	.0335				.1040		37	5.2	.2047				.3320		Q	17.86	.7031	45/64
	.0350		65	2.7	.1063				.2055		5	8.5	.3346			18.0	.7087	
.9	.0354				.1065		36	5.25	.2067			8.6	.3386			18.26	.7187	23/32
	.0360		64	2.75	.1082			5.3	.2086				.3390		R	18.5	.7283	
	.0370		63	2.78	.1094	7/64			.2090		4	8.7	.3425			18.65	.7344	47/64
.95	.0374				.1100		35	5.4	.2126			8.73	.3437	11/32		19.0	.7480	
	.0380		62	2.8	.1102				.2130		3	8.75	.3445			19.05	.7500	3/4
	.0390		61		.1110		34	5.5	.2165			8.8	.3465			19.45	.7656	49/64
1.0	.0394				.1130		33	5.56	.2187	7/32			.3480		S	19.5	.7677	
	.0400		60	2.9	.1141			5.6	.2205			8.9	.3504			19.84	.7812	25/32
	.0410		59		.1160		32		.2210		2	9.0	.3543			20.0	.7874	
1.05	.0413			3.0	.1181			5.7	.2244				.3580		T	20.24	.7969	51/64
	.0420		58		.1200		31	5.75	.2263			9.1	.3583			20.5	.8071	
	.0430		57	3.1	.1220				.2280		1	9.13	.3594	23/64		20.64	.8125	13/16
1.1	.0433			3.18	.1250	1/8		5.8	.2283			9.2	.3622			21.0	.8268	
1.15	.0452			3.2	.1260			5.9	.2323			9.25	.3641			21.03	.8281	53/64
	.0465		56	3.25	.1279				.2340		A	9.3	.3661			21.43	.8437	27/32
1.19	.0469	3/64			.1285		30	5.95	.2344	15/64			.3680		U	21.5	.8465	
1.2	.0472			3.3	.1299			6.0	.2362			9.4	.3701			21.83	.8594	55/64
1.25	.0492			3.4	.1338				.2380		B	9.5	.3740			22.0	.8661	
1.3	.0512				.1360		29	6.1	.2401			9.53	.3750	3/8		22.23	.8750	7/8
	.0520		55	3.5	.1378				.2420		C		.3770		V	22.5	.8858	
1.35	.0531				.1405		28	6.2	.2441			9.6	.3780			22.62	.8906	57/64
	.0550		54	3.57	.1406	9/64		6.25	.2460		D	9.7	.3819			23.0	.9055	
1.4	.0551			3.6	.1417			6.3	.2480			9.75	.3838			23.02	.9062	29/32
1.45	.0570				.1440		27	6.35	.2500	1/4	E	9.8	.3858			23.42	.9219	59/64
1.5	.0591			3.7	.1457			6.4	.2520				.3860		W	23.5	.9252	
	.0595		53		.1470		26	6.5	.2559			9.9	.3898			23.81	.9375	15/16
1.55	.0610			3.75	.1476				.2570		F	9.92	.3906	25/64		24.0	.9449	
1.59	.0625	1/16			.1495		25	6.6	.2598			10.0	.3937			24.21	.9531	61/64
1.6	.0629			3.8	.1496				.2610		G		.3970		X	24.5	.9646	
	.0635		52		.1520		24	6.7	.2638				.4040		Y	24.61	.9687	31/32
1.65	.0649			3.9	.1535			6.75	.2657	17/64		10.32	.4062	13/32		25.0	.9843	
1.7	.0669				.1540		23	6.75	.2657				.4130		Z	25.03	.9844	63/64
	.0670		51	3.97	.1562	5/32			.2660		H	10.5	.4134			25.4	1.000	I

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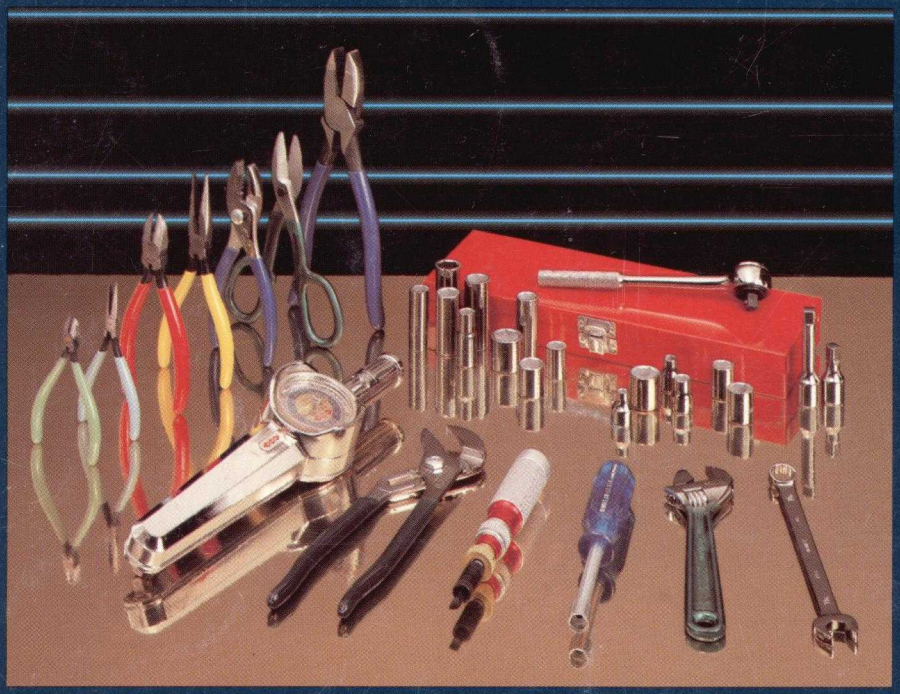

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